SONY

HD D/A CONVERTER BOARD

HKPF-102

HDVS

MAINTENANCE MANUAL

1st Edition (Revised 5)

Serial No. 11001 and Higher (UCJ)

Serial No. 30001 and Higher (J)

⚠警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理など行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

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Manual Structure

Purpose of this manual

This manual is the maintenance manual for HD D/A Converter Board HKPF-102. This manual describes the information items necessary when the unit is supplied and installed, items that premise the service based on the components parts such as alignment, schematic diagrams, board layouts and spare parts lists, assuming use of system and service engineers.

Contents

The following are summaries of the each section for understanding the manual.

Section 1 Installation

Describes information about internal switch settings, connector input/output signals and connection connector.

Section 2 Service Overview

Describes information about internal indicator indication, circuit description and note on replacement of electrical parts.

Section 3 Electrical Alignment

Describes the general information for electrical adjustment and the adjustment procedure of this unit.

Section 4 Spare Parts

Describes exploded views, parts list and optional fixtures used in the unit.

Section 5 Semiconductor Pin Assignments

Describes function diagrams and pin names of semiconductor used in the unit.

Section 6 Block Diagram

Describes overall block diagram of the unit.

Section 7 Board Layouts

Describes board layouts for every circuit board.

Section 8 Schematic Diagrams

Describes schematic diagrams for every circuit board.

Relative manual

Besides this maintenance manual the following manual is available for this unit.

Operation Manual (Supplied with this unit)

This manual is necessary for application and operation of this unit.

Section 1
Installation

The HKPF-102 is an HD D/A converter board, which is installed in a PFV-D20/D300 digital video interface unit (separately available) for use. For details on installation, refer to the maintenance manual or operation and maintenance manual supplied with the digital video interface unit.
This unit conforms to the 1080 transmission matrix prescribed in accordance with the ITU-R BT.709 standards. (Units which are pasted with the "MATRIX BT.709" label on the A side of the DA-126 board conform to the ITU-R BT.709.)
To set back the 1035 transmission matrix conforming to the SMPTE 240M, the unit needs to be adjusted on R/G/B level adjustments. For details on adjusting, refer to Sections 3-6, 3-8 and 3-10 in "Electrical Alignment" section.

1-1. Internal Switch/Control Settings

DA-126 board

S4: OUTPUT YP_BP_R/GBR (board panel)
Selects the signal format of the HD analog signal to be output at the ANALOG OUT1 connector (Y/G, P_B/B, P_R/R).
Factory-set position: YP_BP_R

S5: OUTPUT YP_BP_R/GBR (board panel)
Selects the signal format of the HD analog signal to be output at the ANALOG OUT2 connector (Y/G, P_B/B, P_R/R).
Factory-set position: YP_BP_R

S9: LEVEL PRESET/VARI (board panel)
Selects whether the level of the signal output at ANALOG OUT connector is fixed or variable.
PRESET: Fixed to a factory-set level
VARI (VARIABLE): All of the output levels except SYNC are variable with RV4.

RV4: MASTER (board panel)
Adjusts all of the output levels except SYNC in the range of ±5% with the switch S9 set to VARI.

S8: CPU reset switch

S3: Factory-use switch (8bit)
Always set to OFF.
Factory-set position: All OFF

S1, 2, 6, 7: Not used

DA-126 Board (A side)

1-2. Connectors and Cables

1-2-1. Connector Input/Output Signals

DIGITAL IN (1125 digital signal)
BNC type, Based on BTA-S004A

ANALOG OUT (1125 analog signal)
BNC type, Based on BTA-S001A
SYNC: ±0.3 V, 3-state SYNC, 75 Ω

Y/G (2 channels)
Y/G: 1.0 Vp-p (video; 0.7 V, sync; ±0.3 V) , 75 Ω

P_B/B (2 channels)
B: 1.0 Vp-p (video; 0.7 V, sync; ±0.3 V) , 75 Ω
P_B: video; ±0.35 V, sync; ±0.3 V, 75 Ω

P_R/R (2 channels)
R: 1.0 Vp-p (video: 0.7 V, sync: ±0.3 V) , 75 Ω
P_R: video; ±0.35 V, sync; ±0.3 V, 75 Ω

1-2-2. Connection Connector

Connection made with the connector panels during installation or service, should be made with the connectors/ complete cable assemblies specified in the following list, or equivalent parts.

Indication	Connection connector/Cable
DIGITAL IN ANALOG OUT (BNC)	1-564-742-11 PLUG, BNC

1-3. Modification for 1035 Transmission Matrix

This unit conforms to the 1080 transmission matrix prescribed in accordance with the ITU-R BT.709 standards.
To set back the 1035 transmission matrix conforming to the SMPTE 240M, the unit needs to be adjusted on R/G/B level adjustments using a signal generator conforming to SMPTE 240M.
For details on adjusting, refer to Sections 3-6, 3-8 and 3-10 in “Electrical Alignment” section.

Section 2
Service Overview

2-1. Indication of Internal Indicator

The following explains the function of indicator on the DA-126 board.

Address	Ref.No.	Indication	Description
Board Panel	D21	POWER	Lit when the power is normally supplied
	D20	1035	Indicates the number of active lines lit: 1035 dark: 1080
	D19	59.94	Indicates the field frequency of input signal lit: 59.94 Hz dark: 60 Hz
	D18	VIDEO INPUT	Lit when input signal is detected
	D17	CRCC	Lit when input signal is in error
Q-1	D1	F1	Lit by the passage of +5 V (1) line
	D2	F2	Lit by the passage of +5 V (2) line
	D3	F3	Lit by the passage of –5 V line

DA-126 Board (A side)

2-2. Circuit Description

DA-126 board

The HD SDI signal input from DIF-62 board is converted to 74-MHz, 20-bit parallel data by IC20. HD-H (horizontal sync signal) and HD-F (frame sync signal) are extracted by a format decoder IC22. The Y signal is passed through a simple branking circuit and P_B/P_R signal is demultiplexed. They are digital-to-analog converted respectively.
The analog signal, $Y/P_B/P_R$ is sent through a post filter, to a matrix and selector circuits. The signal which was sent to the matrix circuit is converted to R/G/B signal. A selector circuit in the next stage selects the $Y/P_B/P_R$ signal or R/G/B signal according to the settings of switches S4 and S5. Selected signal is outpout through the DIF-62 board.
The DA-126 board is provided with a power circuit and detection circuits to detect a field frequency (59.94 or 60.0) of input signal and the number of the active lines (1035/1080) in an image area. The power circuit consists of series regulators of +4.5 V and −4.5 V and switching regulators of +3.3 V, +1.2 V and −2 V. EEPROM on this board stores the status previous to being powered off, such as the active lines in an image area and the field frequency.

DIF-62 board

The DIF-62 board has an input connector for the HD SDI signal and output connectors for HD analog signal (Y/G, P_B/B, P_R/R two each, and SYNC). It also has a cable equalizer and clock recovery circuit of the HD SDI signal.

2-3. Optional Fixtures

Description	P/N	Remarks
Extension board EX-331	J-6185-960-A	To extend DA-126 board
IC extractor	J-6035-070-A	To extract IC12/DA-126 board (Usable for PLCC IC with pins 20 to 124)

2-4. Circuit Protection Device

The DA-126 board is equipped with two positive thermistors F1 and F3 for +5 V and −5 V respectively. This device limits a current by steeply increasing the innner resistance when it rises to a certain temperature due to overcurrent or high ambient temperature. The device being activated, the indicator beside it will go out at the same time. If activated, turn off the power and check the unit. After the cause is eliminated and the device cools off, turn on the power again. If there is no trouble, the unit will operate normally.

2-5. Note on Replacement of Electrical Parts

The DA-126 and DIF-62 boards are equipped with a high-frequency circuit (1.5 GHz) in the shielding case on each board. So every electrical part contained in the shielding case can not be replaced. If the high-frequency circuit in the DA-126 board fails, please order the HKPF-102 through the sales route for replacement. If that in the DIF-62 board fails, replace the DIF-62 board itself.

2-6. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked ⚠ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.
Parts list has the present standardized repair parts.

3. Stock of Parts

Parts marked with “o” at SP(Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

4. Units Representation

The following represented units are changed or omitted in writing.

Units		Representation
Capacitance	μF	uF
Inductance	μH	uH
Resistance	Ω	Abbreviation
Temperature	°C	XXX-DEG-C

2-7. Note on Replacement of CPU

IC12 on the DA-126 board is a CPU with a built-in ROM. The designation of the program is suffixed to the IC name. As the ROM version is changed, the designation of the suffix is also changed. Require attention not to use the CPU which is not programmed.

Section 3
Electrical Alignment

3-1. Preparation

3-1-1. Equipment Required

Measuring Equipment

- Oscilloscope (Band width 300 MHz or more)
  Tektronix 2465B or equivalent
- HD-SDI signal generater
  Shibasoku TG15C6 or equivalent
  (Transmission matrix conforming to ITU-R BT.709.)
  Shibasoku TG15A6 or equivalent
  (Transmission matrix conforming to SMPTE 240M.)
- HDTV analog waveform monitor
  Tektronix 1735HD/1730HD or equivalent

Peripheral Equipment

- Sony digital video interface unit
  Either of PFV-D20 and D300

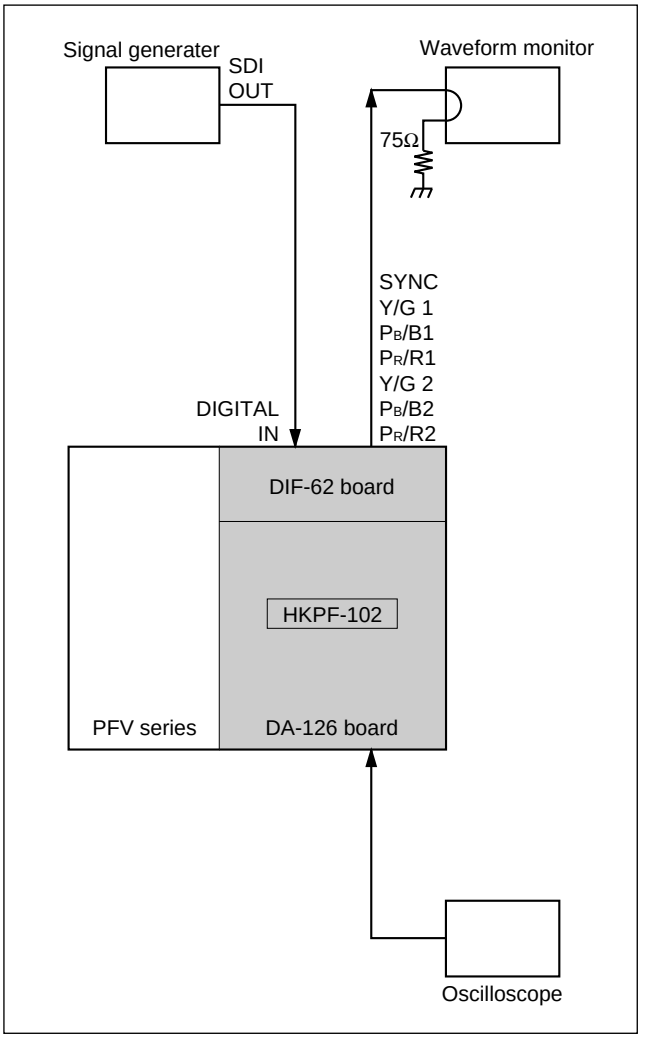
Fixture

- Extension board EX-331 (Sony P/N: J-6185-960-A)

3-1-2. Notes on Adjustment

- All measuring equipment shall be completely calibrated.
- Connect each equipment properly referring to Section 3-1-3.
- As for initial settings before beginning adjustment, refer to Section 3-1-4.
- Before the adjustment, be sure to warm the unit up for about ten minutes.
- Turn off the power to the digital video interface unit before extending the DA-126 board.
- ⊘RV4 on the DA-126 board can vary the level of the signals output at ANALOG OUT connectors except SYNC in the range of ±5 % only when the switch S9 on the DA-126 board is set to “VARI”. Refer to Section 1-1 for details.
- ⊘RV600 on the DA-126 board (with board suffix -14 or later) is only for factory-use. Do not touch it in the field.
- To set back the 1035 transmission matrix conforming to the SMPTE 240M, the unit needs to be adjusted on R/G/B level adjustments. For details on adjusting, refer to Sections 3-6, 3-8 and 3-10.

3-1-3. Connection



3-1-4. Initial Setting

1. Switch settings
   When changing the following switches from a customer-set position, it is recommended to record the setting states in the table below.
   After adjustment is complete, be sure to return the switches to their customer-set positions.

Board	Switch	Setting during adjustment	Customer-set position
DA-126	S4 (board panel)	YP_BP_R	
	S5 (board panel)	YP_BP_R	
	S9 (board panel)	PRESET	

2. Signal input
   Input the 100% color-bar signal from SDI OUT of the HD SDI signal generator to DIGITAL IN connector.

3. Board extension
   All adjustments described in this section require extending the DA-126 board.

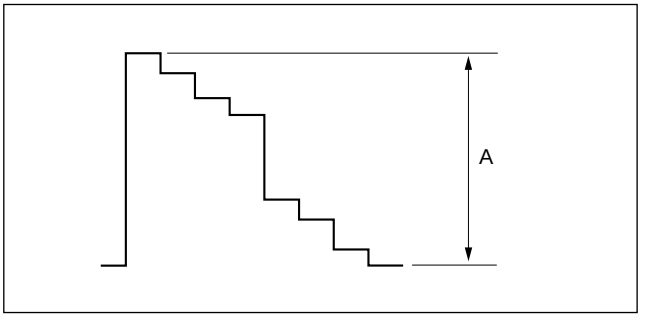
4. Setting of oscilloscope
   20 MHz LIMIT → OFF

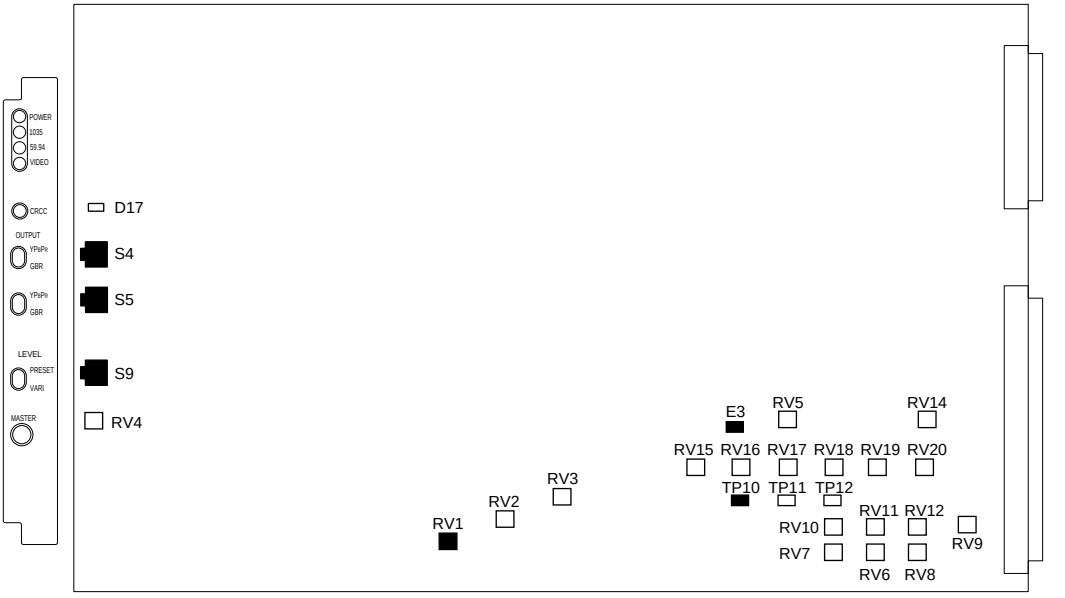
3-2. D/A Y Level Adjustment

Equipment: Oscilloscope

Adjustment Procedure

Test point: TP10/DA-126
GND: E3/DA-126
Adjustment point: ⊘RV1/DA-126
Specification: A = 1000 ± 10 mV





DA-126 Board (A side)

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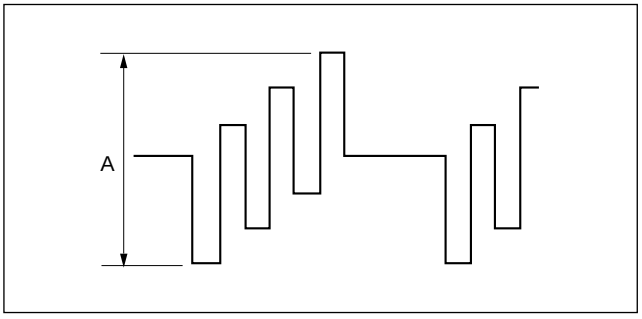
3-3. D/A P_B Level Adjustment

Equipment: Oscilloscope

Adjustment Procedure

Test point: TP11/DA-126
GND: E3/DA-126
Adjustment point: ⊘RV2/DA-126
Specification: A = 1000 ±10 mV

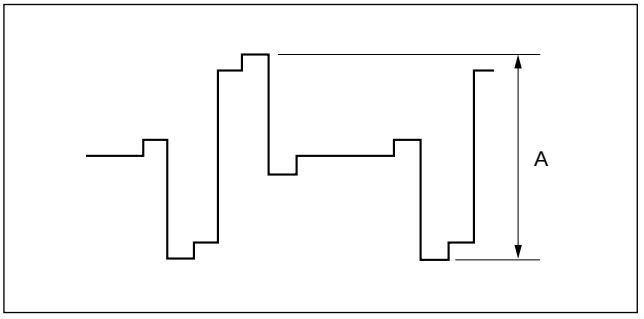


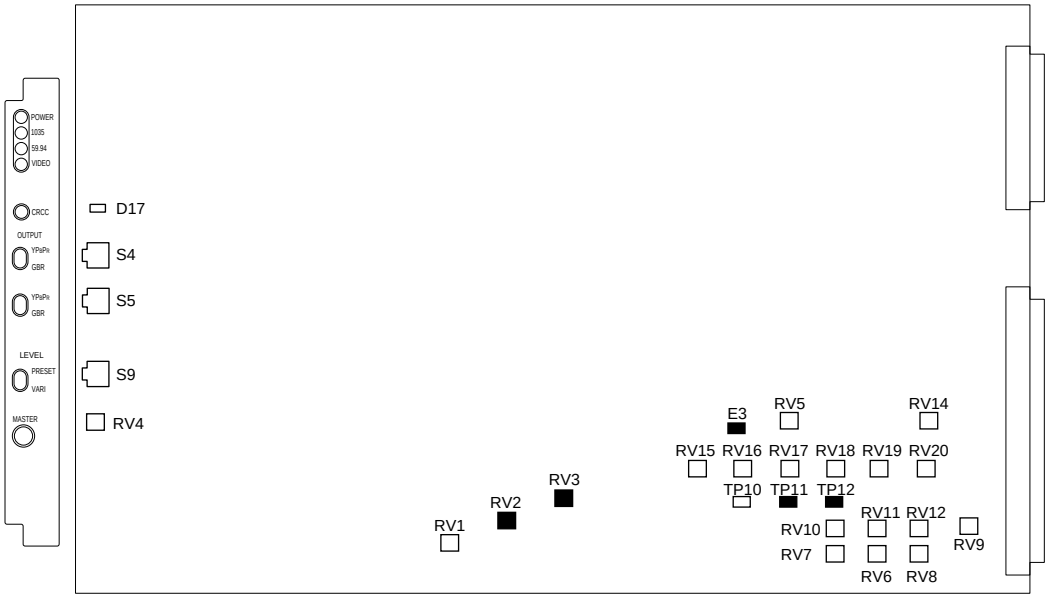
3-4. D/A P_R Level Adjustment

Equipment: Oscilloscope

Adjustment Procedures

Test point: TP12/DA-126
GND: E3/DA-126
Adjustment point: ⊘RV3/DA-126
Specification: A = 1000 ±10 mV





DA-126 Board (A side)

3-5. Y/G 1 Output Level • SYNC Balance Adjustment

Equipment: Analog waveform monitor
Test point: Y/G 1 connector

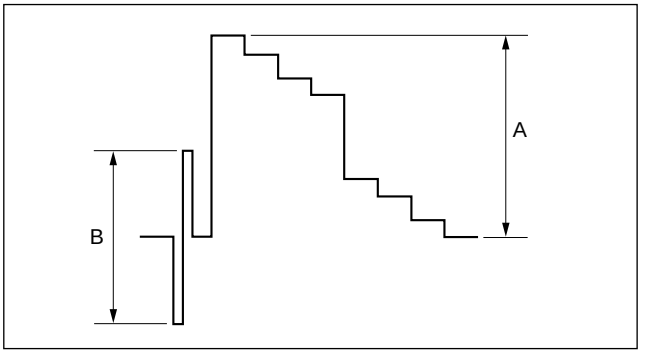
Preparation

- Connect the waveform monitor (terminated with 75 Ω) to Y/G 1 connector.

Adjustment Procedures

1. Y/G 1 output level adjustment
   Adjustment point: ⊘RV15/DA-126
   Specification: A = 700 ±7 mV

2. SYNC balance adjustment
   Adjustment point: ⊘RV5/DA-126
   Specification: B = 600 ±6 mV



3-6. G Level Adjustment

Equipment: Analog waveform monitor
Test point: Y/G 1 connector

Preparations

- Connect the waveform monitor (terminated with 75 Ω) to Y/G 1 connector.
- S4/DA-126 board panel → GBR

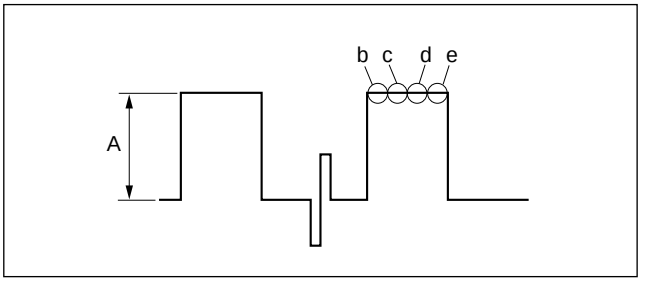
Adjustment Procedures

1. Adjustment point: ⊘RV6/DA-126
   Specification: The level “b” of the waveform satisfies the specification A.
   A = 700 ±7 mV

2. Adjustment point: ⊘RV10/DA-126
   Specification: The level “d” of the waveform shall be equal to the level “b”.

3. Adjustment point: ⊘RV7/DA-126
   Specification: The levels from “b” to “e” shall be equal.

4. Adjust ⊘RV6 and ⊘RV10 alternately until the levels from “b” to “e” satisfy the specification A.



Setting after Adjustment

- S4/DA-126 board panel → YP_BP_R

3-7. P_B/B 1 Output Level Adjustment

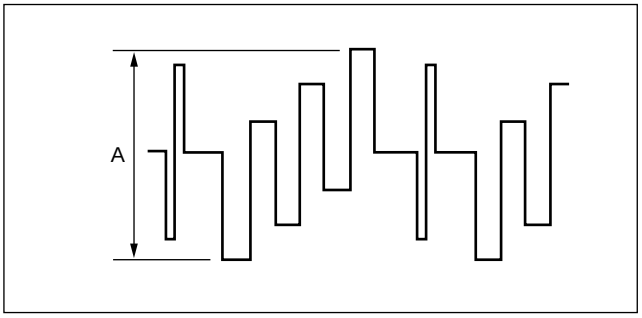
Equipment: Analog waveform monitor
Test point: P_B/B 1 connector

Preparation

- Connect the waveform monitor (terminated with 75 Ω) to P_B/B 1 connecotr.

Adjustment Procedures

Adjustment point: ⊘RV16/DA-126
Specification: A = 700 ±7 mV



3-8. B Level Adjustment

Equipment: Analog waveform monitor
Test point: P_B/B 1 connector

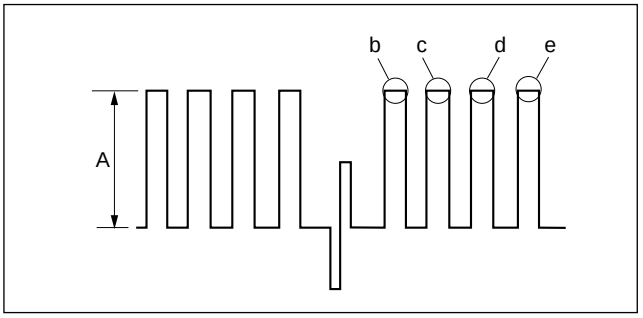
Preparations

- Connect the waveform monitor (terminated with 75 Ω) to P_B/B 1 connector.
- S4/DA-126 board panel → GBR

Adjustment Procedures

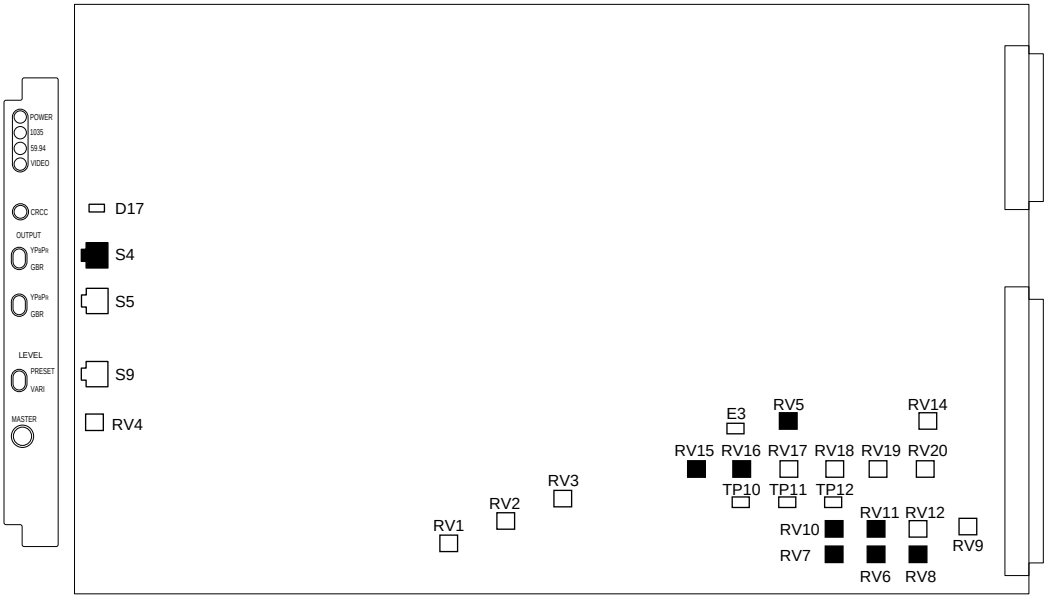
1. Adjustment point: ⊘RV8/DA-126
   Specification: The levels from “b” to “e” shall be equal.

2. Adjustment point: ⊘RV11/DA-126
   Specification: A = 700 ±7 mV



Setting after Adjustment

- S4/DA-126 board panel → YP_BP_R



DA-126 Board (A side)

3-9. P_R/R 1 Output Level Adjustment

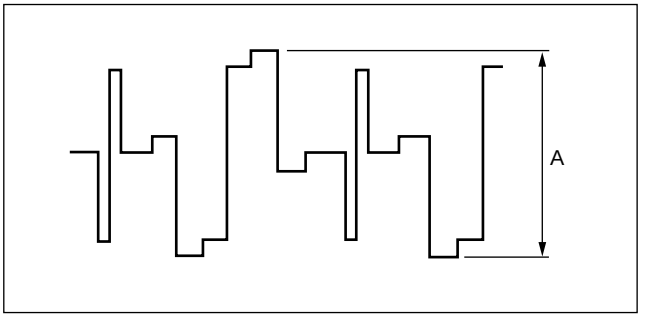
Equipment: Analog waveform monitor
Test point: P_R/R 1 connector

Preparation

- Connect the waveform monitor (terminated with 75 Ω) to P_R/R 1 connector.

Adjustment Procedure

Adjustment point: ⊘RV17/DA-126
Specification: A = 700 ±7 mV



3-10. R Level Adjustment

Equipment: Analog waveform monitor
Test point: P_R/R 1 connector

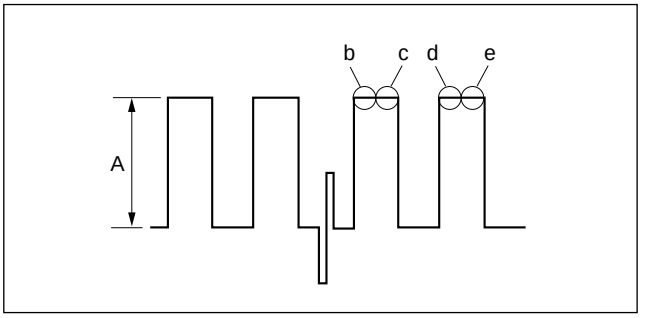
Preparations

- Connect the waveform monitor (terminated with 75 Ω) to P_R/R 1 connector.
- S4/DA-126 board panel → GBR

Adjustment Procedures

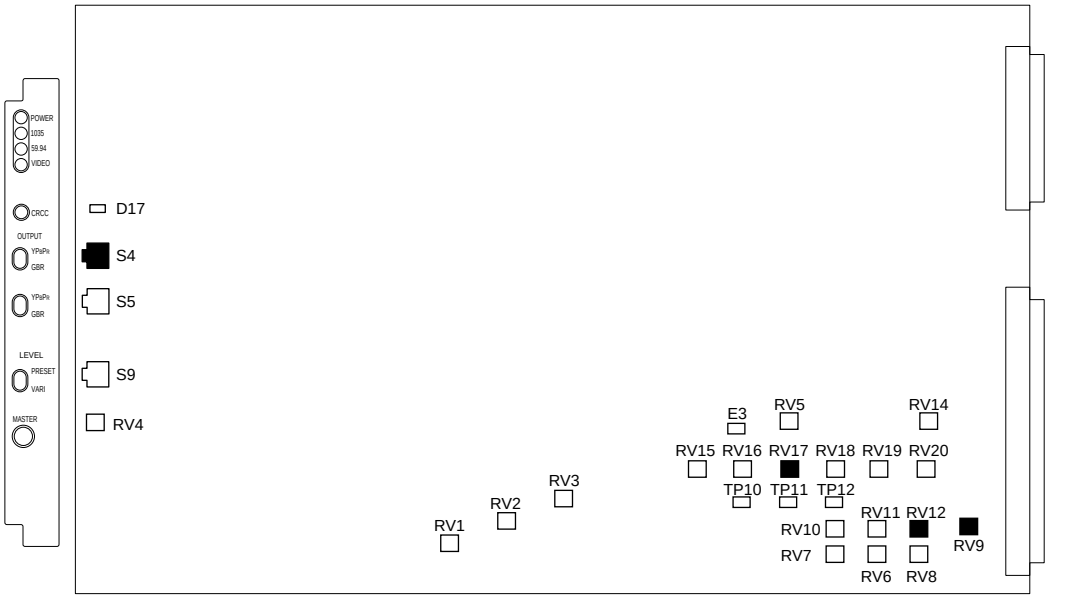
1. Adjustment point: ⊘RV9/DA-126
   Specification: The levels from “b” to “e” shall be equal.

2. Adjustment point: ⊘RV12/DA-126
   Specification: A = 700 ±7 mV



Setting after Adjustment

- S4/DA-126 board panel → YP_BP_R



DA-126 Board (A side)

3-11. Y/G 2 Output Level Adjustment

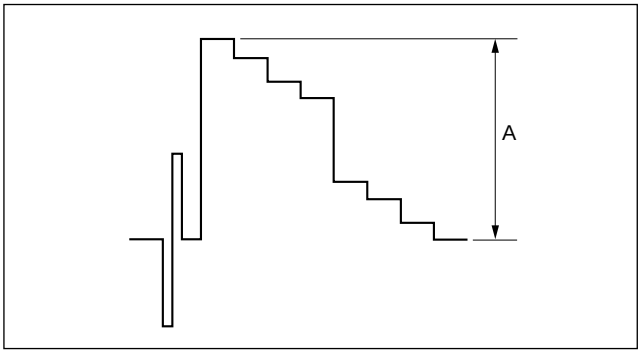
Equipment: Analog waveform monitor
Test point: Y/G 2 connector

Preparation

- Connect the waveform monitor (terminated with 75Ω) to Y/G 2 connector.

Adjustment Procedure

Adjustment point: ⊘RV18/DA-126
Specifications: A = 700 ±7 mV



3-12. P_B/B 2 Output Level Adjustment

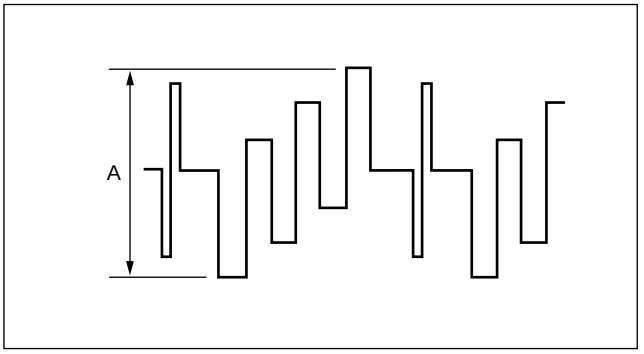
Equipment: Analog waveform monitor
Test point: P_B/B 2 connector

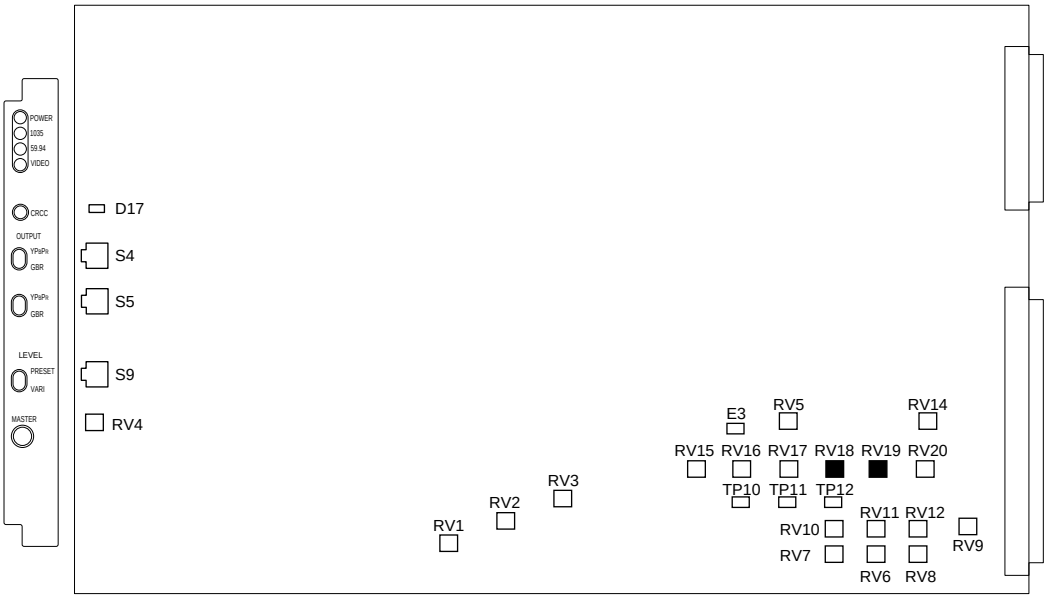
Preparation

- Connect the waveform monitor (terminated with 75Ω) to P_B/B 2 connector.

Adjustment Procedure

Adjustment point: ⊘RV19/DA-126
Specification: A = 700 ±7 mV





DA-126 Board (A side)

3-13. P_R/R 2 Output Level Adjustment

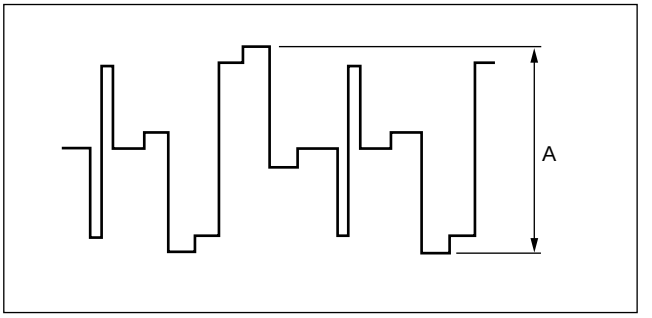
Equipment: Analog waveform monitor
Test point: P_R/R 2 connector

Preparation

- Connect the waveform monitor (terminated with 75 Ω) to P_R/R 2 connector.

Adjustment Procedure

Adjustment point: ◓RV20/DA-126
Specification: A = 700 ±7 mV



3-14. SYNC Output Level Adjustment

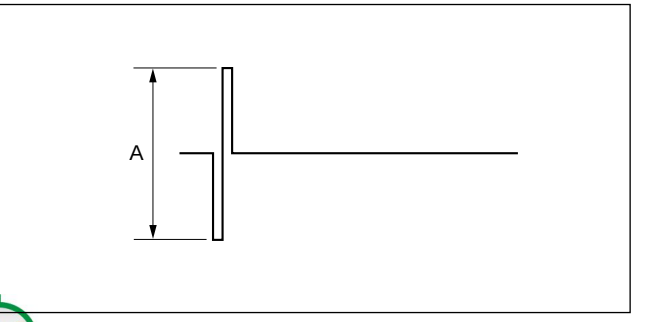
Equipment: Analog waveform monitor
Test point: SYNC connector

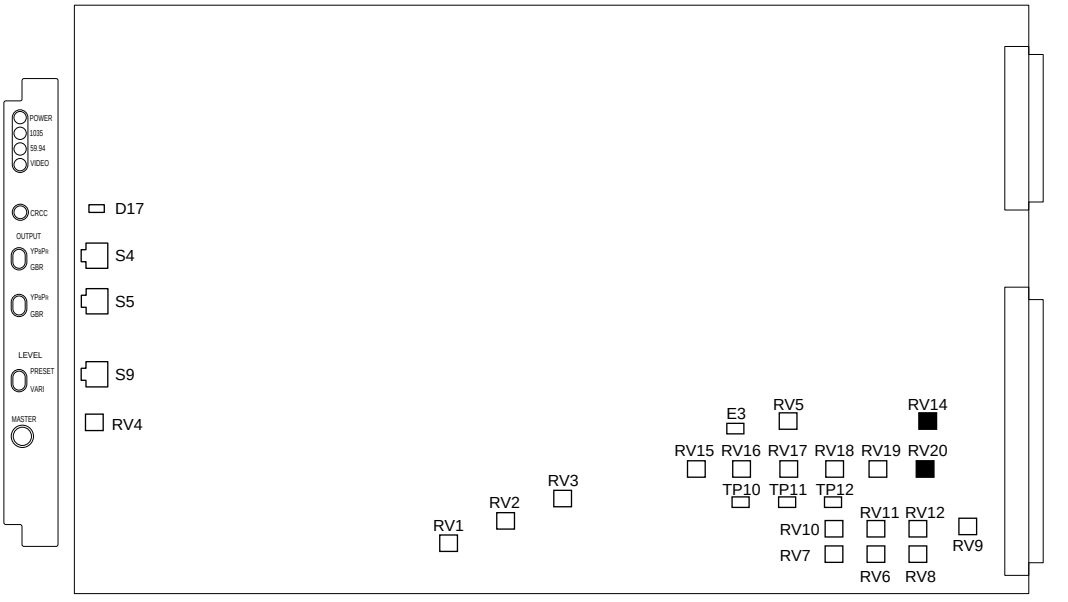
Preparation

- Connect the waveform monitor (terminated with 75 Ω) to SYNC connector.

Adjustment Procedure

Adjustment point: ◓RV14/DA-126
Specification: A = 600 ±6 mV

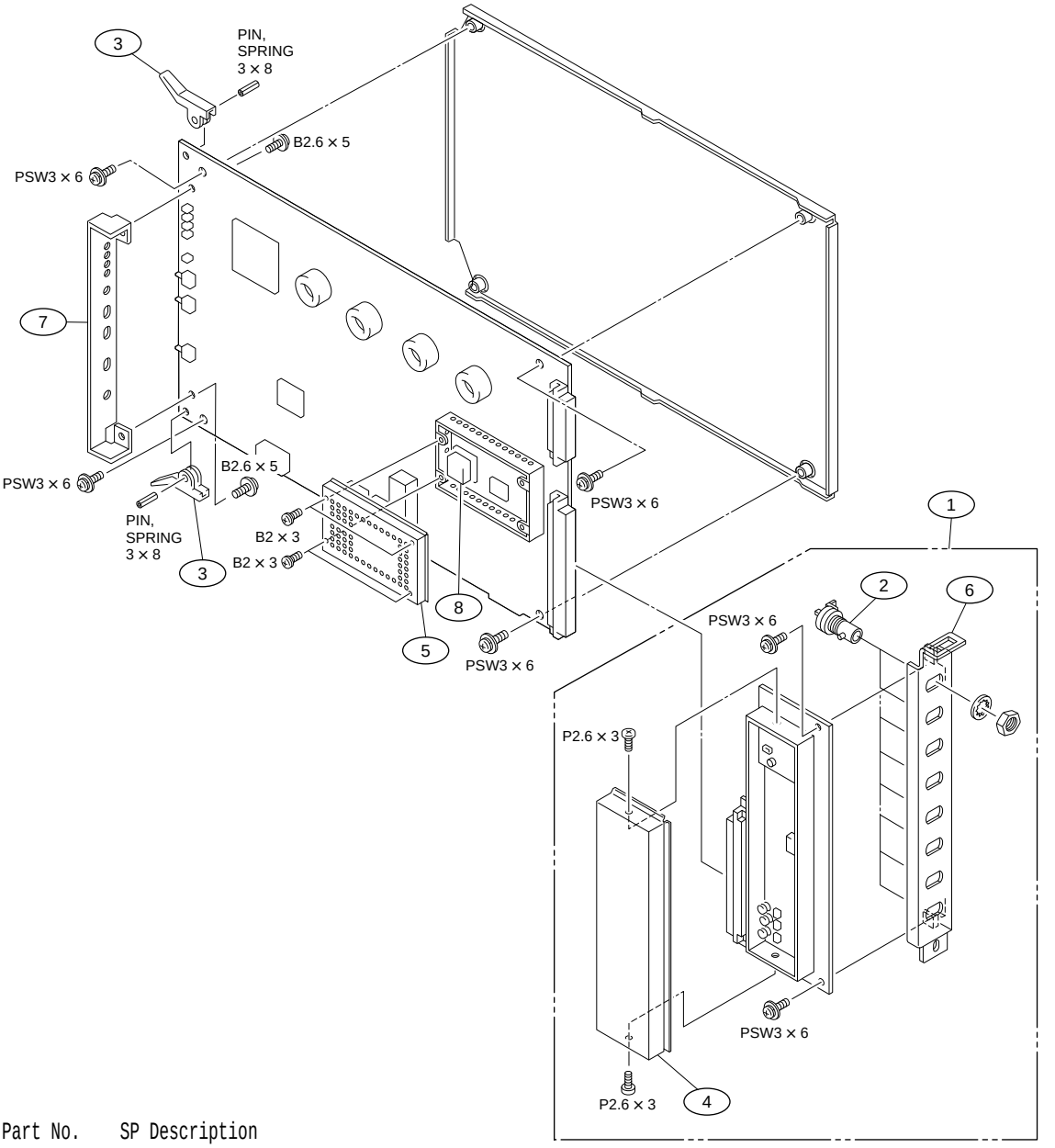




DA-126 Board (A side)

Section 4
Spare Parts

4-1. Exploded View



No.	Part No.	SP	Description
1	A-8313-797-A	o	MOUNTED CIRCUIT BOARD, DIF-62
2	1-764-273-11	s	CONNECTOR, BNC "DIGITAL IN""ANALOG OUT"
3	2-182-909-01	o	LEVER, PC BOARD
4	3-608-261-01	o	COVER, SHIELD CASE(1)
5	3-608-265-01	o	COVER, SHIELD CASE(B)
6	3-608-270-01	o	PANEL(102), CONNECTOR
7	3-608-271-02	o	PANEL, FRONT(102)
8	3-694-127-01	o	SHEET(L), VENTILATION
	7-621-259-18	s	SCREW +P 2.6X3
	7-621-770-87	s	SCREW +B 2.6X5
	7-621-772-08	s	SCREW +B 2X3
	7-626-320-11	s	PIN, SPRING 3X8
	7-682-947-01	s	SCREW +PSW 3X6

4-2. Electrical Parts List

DA-126 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
2pcs	1-533-223-11	s	CLIP,FUSE
2pcs	2-182-909-01	o	LEVER,PC BOARD
1pc	3-608-265-01	o	COVER,SHIELD CASE(B)
1pc	3-608-271-02	o	PANEL,FRONT(102)
6pcs	3-621-124-00	o	LINING
1pc	3-694-127-01	o	SHEET(L),VENTILATION
2pcs	7-621-770-87	s	SCREW +B2.6X5(EP-FE/CU,NI,CR)
4pcs	7-621-772-08	s	SCREW +B2X3(EP-FE/CU,NI,CR)
2pcs	7-626-320-11	s	SPRING PIN,3X8 (STEEL)
4pcs	7-682-947-01	s	SCREW +PSW 3X6(EP-FE/ZN/CM2)
C1	1-128-397-21	s	CAPACITOR, ELECT 100MF 16V
C2	1-128-397-21	s	CAPACITOR, ELECT 100MF 16V
C3	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C4	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C5	1-128-397-21	s	CAPACITOR, ELECT 100MF 16V
C6	1-128-397-21	s	CAPACITOR, ELECT 100MF 16V
C7	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C8	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C9	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C10	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C11	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C12	1-128-397-21	s	CAPACITOR, ELECT 100MF 16V
C13	1-128-397-21	s	CAPACITOR, ELECT 100MF 16V
C14	1-135-076-21	s	CAPACITOR,TANTALUM 1.0MF/35V
C15	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C16	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C17	1-135-145-11	s	CAPACITOR TANTALUM 0.47MF/35V
C18	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C19	1-163-037-11	s	CAPACITOR,CHIP CERAMIC 0.022MF
C20	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C21	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C22	1-135-076-21	s	CAPACITOR TANTALUM 1.0MF/35V
C23	1-135-215-21	s	CAPACITOR TANTALUM 6.8MF/16V
C24	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C25	1-135-215-21	s	CAPACITOR TANTALUM 6.8MF/16V
C26	1-107-685-11	s	CAPACITOR TANTALUM 15MF/6.3V
C27	1-163-021-91	s	CAPASITOR, CERAMIC 0.01MF/50V
C28	1-128-397-21	s	CAPACITOR, ELECT 100MF 16V
C29	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C30	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C31	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C32	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C33	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C34	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C35	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C36	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C37	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C38	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C39	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C40	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C43	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C45	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C47	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C49	1-164-695-11	s	CAPACITOR,CERAMIC 2200PF/50V
C53	1-107-685-11	s	CAPACITOR TANTALUM 15MF/6.3V
C54	1-135-211-11	s	CAPACITOR TANTAL 6.8MF/6.3V
C55	1-135-145-11	s	CAPACITOR TANTALUM 0.47MF/35V
C57	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C59	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V

(DA-126 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C61	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C63	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C65	1-107-877-11	s	CAPACITOR, ELECT 1000MF/10V
C67	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C69	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C70	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C71	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C72	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C73	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C74	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C75	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C76	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C77	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C78	1-163-235-11	s	CAPACITOR,CHIP CERAMIC 22PF(M-
C79	1-163-235-11	s	CAPACITOR,CHIP CERAMIC 22PF(M-
C80	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C81	1-135-164-21	s	CAPACITOR TANTALUM 22MF/20V
C82	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C83	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C133	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C134	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C135	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C136	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C137	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C138	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C139	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C140	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C141	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C142	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C143	1-163-229-11	s	CAPACITOR CHIP 12PF/50V(2125)
C145	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C147	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C148	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C149	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C150	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C151	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C152	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C153	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C154	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C155	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C156	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C157	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C158	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C159	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C160	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C161	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C162	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C163	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C164	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C165	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C166	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C167	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C168	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C169	1-104-852-11	s	CAPACITOR,TANTALUM 22MF/10V
C170	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C171	1-135-216-11	s	CAPACITOR TANTATUM 10MF/10V
C172	1-135-216-11	s	CAPACITOR TANTATUM 10MF/10V
C173	1-135-216-11	s	CAPACITOR TANTATUM 10MF/10V
C174	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V

(DA-126 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C175	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C176	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C177	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C178	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C179	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C180	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C181	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C182	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C183	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C184	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C185	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C186	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C187	1-135-216-11	s	CAPACITOR TANTATUM 10MF/10V
C188	1-135-216-11	s	CAPACITOR TANTATUM 10MF/10V
C189	1-135-216-11	s	CAPACITOR TANTATUM 10MF/10V
C190	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C191	1-135-091-00	s	CAPACITOR TANTALUM 1MF/16V
C192	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C193	1-135-091-00	s	CAPACITOR TANTALUM 1MF/16V
C194	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C195	1-135-091-00	s	CAPACITOR TANTALUM 1MF/16V
C196	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C197	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C198	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C199	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C200	1-163-021-91	s	CAPASITOR, CERAMIC 0.01MF/50V
C201	1-163-021-91	s	CAPASITOR, CERAMIC 0.01MF/50V
C202	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C203	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C204	1-163-082-00	s	CAPACITOR,CHIP CERAMIC 0.5PF
C205	1-163-217-11	s	CAPACITOR. CHIP CERAMIC 1.0PF
C206	1-163-217-11	s	CAPACITOR. CHIP CERAMIC 1.0PF
C207	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C208	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C209	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C210	1-135-161-21	s	CAPACITOR TANTALUL 22MF/10V
C211	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C212	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C213	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C214	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C215	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C216	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C218	1-163-217-11	s	CAPACITOR. CHIP CERAMIC 1.0PF
C219	1-163-217-11	s	CAPACITOR. CHIP CERAMIC 1.0PF
C220	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C221	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C222	1-135-161-21	s	CAPACITOR TANTALUL 22MF/10V
C223	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C225	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C226	1-163-217-11	s	CAPACITOR. CHIP CERAMIC 1.0PF
C227	1-163-082-00	s	CAPACITOR,CHIP CERAMIC 0.5PF
C228	1-163-217-11	s	CAPACITOR. CHIP CERAMIC 1.0PF
C229	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C230	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C231	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C232	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C233	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C234	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C235	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V

(DA-126 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C236	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C237	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C239	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C240	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C241	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C242	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C243	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C244	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C245	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C246	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C247	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C248	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C249	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C250	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C251	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C252	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C253	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C254	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C255	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C256	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C257	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C258	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C259	1-135-180-21	s	CAPACITOR TANTALUM 3.3MF/10V
C260	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C261	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C262	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C263	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C264	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C265	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C267	1-163-084-00	s	CAPACITOR,CHIP CERAMIC 1.5PF
C268	1-163-084-00	s	CAPACITOR,CHIP CERAMIC 1.5PF
C269	1-163-084-00	s	CAPACITOR,CHIP CERAMIC 1.5PF
C270	1-163-084-00	s	CAPACITOR,CHIP CERAMIC 1.5PF
C271	1-163-084-00	s	CAPACITOR,CHIP CERAMIC 1.5PF
C272	1-163-084-00	s	CAPACITOR,CHIP CERAMIC 1.5PF
C273	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C274	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C275	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C276	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C277	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C278	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C279	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C280	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C281	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C282	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C283	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C284	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C285	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C286	1-163-251-11	s	CAPACITOR CERAMIC 100PF/50V
C287	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C288	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C289	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C290	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C291	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C292	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C293	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C294	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C295	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C296	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V

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Ref. No. or Q'ty	Part No.	SP	Description
C297	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C298	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C299	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C300	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C301	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C302	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C303	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C304	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C305	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C306	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C307	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C308	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C309	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C310	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C311	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C312	1-163-021-91	s	CAPASITOR, CERAMIC 0.01MF/50V
C313	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C314	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C315	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C316	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C317	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C318	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C319	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C320	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C321	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C322	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C323	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C324	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C325	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
C326	1-163-235-11	s	CAPACITOR,CHIP CERAMIC 22PF(M-
C327	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C328	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C329	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C330	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C331	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C334	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C335	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C336	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C337	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C338	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C339	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C340	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C341	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C401	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
C402	1-163-231-11	s	CAPACITOR,CHIP CERAMIC15PF/50V
C450	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C500	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C501	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C502	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C503	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C504	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C505	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C506	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C507	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C508	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C509	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C510	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
C600	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF
C601	1-163-220-11	s	CAPACITOR, CHIP CERAMIC 3.0PF

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Ref. No. or Q'ty	Part No.	SP	Description	
C602	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)	
C603	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)	
C604	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V	
C605	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C606	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C607	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C608	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C609	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V	
C610	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C611	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C612	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C613	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C614	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V	
C615	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C616	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C617	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C618	1-163-009-11	s	CAPACITOR,CHIP CERAMIC 1000PF	
C619	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V	
CN1	1-569-465-11	o	PIN, DIN CONNECTOR (DIP) 48P	
D1	8-719-987-43	s	LED CL-150PG-CD	
D2	8-719-987-43	s	LED CL-150PG-CD	
D3	8-719-987-43	s	LED CL-150PG-CD	
D4	8-719-157-23	s	DIODE RD4.7M-B	
D5	8-719-801-78	s	DIODE 1SS184	
D6	8-719-801-78	s	DIODE 1SS184	
D7	8-719-801-78	s	DIODE 1SS184	
D8	8-759-274-66	s	IC LM4040BIM3-5.0	
D9	8-759-185-42	s	IC LM4040AIM3-2.5	
D10	8-719-800-76	s	DIODE 1SS226	
D11	8-719-800-76	s	DIODE 1SS226	
D12	8-719-981-38	s	DIODE ERC62M-004	(RECTI)
D13	8-719-981-38	s	DIODE ERC62M-004	(RECTI)
D16	8-719-981-38	s	DIODE ERC62M-004	(RECTI)
D17	8-719-974-39	s	LED HLMP-6300-010	
D18	8-719-974-41	s	LED HLMP-6500-010	
D19	8-719-974-41	s	LED HLMP-6500-010	
D20	8-719-974-41	s	LED HLMP-6500-010	
D21	8-719-974-41	s	LED HLMP-6500-010	
D22	8-719-059-59	s	DIODE MA3J74200LSO	
D23	8-759-185-42	s	IC LM4040AIM3-2.5	
D24	8-719-104-34	s	DIODE 1S2836	
D25	8-719-801-78	s	DIODE 1SS184	
F1	⚠ 1-533-817-21	s	FUSE	
F2	⚠ 1-576-228-11	s	FUSE (H.B.C)	
F3	⚠ 1-533-817-21	s	FUSE	
FL3	1-233-608-11	s	FILTER, LOW PASS	
FL4	1-233-609-11	s	FILTER, LOW PASS	
FL5	1-233-609-11	s	FILTER, LOW PASS	
FL6	1-239-332-11	s	FILTER, LOW PASS	
IC1	8-759-906-53	s	IC TL062CPS	
IC2	8-759-937-36	s	IC TL1451ACNS	
IC4	8-759-937-36	s	IC TL1451ACNS	
IC5	8-759-186-44	s	IC TC74VHC125F	
IC6	8-759-181-29	s	IC TC7W04FU-TE12R	
IC7	8-759-234-20	s	IC TC7S08F	
IC8	8-759-154-60	s	IC UPD71055GB-10-3B4	
IC9	8-759-154-60	s	IC UPD71055GB-10-3B4	

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Ref. No. or Q'ty	Part No.	SP	Description
IC10	8-759-165-37	s	IC X24164SIC7000
IC11	8-759-973-71	s	IC TL7705CPS-B
IC12	8-759-496-01	o	IC H8/532-HKPF101/2-V1.05
IC13	8-759-079-70	s	IC TC74VHC138FS(EL)
IC14	8-759-035-87	s	IC SC7S00F
IC15	8-759-497-30	s	IC LC35256DT-10-TLM
IC16	8-759-079-85	s	IC TC74VHC244FS(EL)
IC17	8-759-182-95	s	IC HD151015T
IC25	8-752-360-44	s	IC CXK1203AR
IC27	8-759-185-63	s	IC TC74VHCT04F (EL)
IC28	8-759-463-80	s	IC 74VHCT574SJX
IC29	8-759-463-80	s	IC 74VHCT574SJX
IC30	8-759-463-80	s	IC 74VHCT574SJX
IC31	8-759-081-49	s	IC TC74VHC08F (EL)
IC32	8-759-491-44	s	IC TC74VHCT74AF (EL)
IC33	8-759-185-70	s	IC TC74VHC32F (EL)
IC34	8-759-175-27	s	IC TC74VHC574F
IC35	8-759-175-27	s	IC TC74VHC574F
IC36	8-759-175-27	s	IC TC74VHC574F
IC37	8-759-176-41	s	IC TC74VHC74F(EL)
IC38	8-759-491-44	s	IC TC74VHCT74AF (EL)
IC39	8-759-186-84	s	IC TC74VHC86F
IC40	8-759-192-49	s	IC SN74AS38157DB
IC41	8-759-463-80	s	IC 74VHCT574SJX
IC42	8-759-463-80	s	IC 74VHCT574SJX
IC43	8-759-463-80	s	IC 74VHCT574SJX
IC44	8-752-375-98	s	IC CXD2315Q
IC45	8-752-375-98	s	IC CXD2315Q
IC46	8-752-375-98	s	IC CXD2315Q
IC47	8-759-463-80	s	IC 74VHCT574SJX
IC48	8-759-054-61	s	IC CLC505AJE
IC49	8-759-054-61	s	IC CLC505AJE
IC50	8-759-054-61	s	IC CLC505AJE
IC51	8-759-054-61	s	IC CLC505AJE
IC52	8-759-054-61	s	IC CLC505AJE
IC53	8-759-054-61	s	IC CLC505AJE
IC54	8-759-054-61	s	IC CLC505AJE
IC55	8-759-054-61	s	IC CLC505AJE
IC56	8-752-068-24	s	IC CXA1450M-TH
IC57	8-752-068-24	s	IC CXA1450M-TH
IC58	8-752-068-24	s	IC CXA1450M-TH
IC59	8-752-068-24	s	IC CXA1450M-TH
IC60	8-752-068-24	s	IC CXA1450M-TH
IC61	8-752-068-24	s	IC CXA1450M-TH
IC62	8-759-054-61	s	IC CLC505AJE
IC63	8-759-054-61	s	IC CLC505AJE
IC64	8-759-054-61	s	IC CLC505AJE
IC65	8-759-054-61	s	IC CLC505AJE
IC66	8-759-054-61	s	IC CLC505AJE
IC67	8-759-054-61	s	IC CLC505AJE
IC68	8-759-054-61	s	IC CLC505AJE
IC69	8-759-491-33	s	IC TC74VHCT08AF (EL)
IC70	8-759-491-32	s	IC TC74VHCT04AF (EL)
IC72	8-759-491-44	s	IC TC74VHCT74AF (EL)
IC73	8-759-037-79	s	IC MC74HC163AF
IC77	8-759-037-79	s	IC MC74HC163AF
IC78	8-759-386-22	s	IC 74LCX04SJX
IC79	8-759-037-79	s	IC MC74HC163AF
IC80	8-759-037-79	s	IC MC74HC163AF

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IC81	8-759-037-79	s	IC MC74HC163AF
IC83	8-759-386-23	s	IC 74LCX125SJX
IC84	8-759-069-36	s	IC MC74HC4046AF
IC85	8-759-970-59	s	IC TLC272CPS
IC86	8-759-970-59	s	IC TLC272CPS
IC87	8-759-186-44	s	IC TC74VHC125F
IC88	8-759-234-20	s	IC TC7S08F
IC89	8-759-463-80	s	IC 74VHCT574SJX
IC90	8-759-463-80	s	IC 74VHCT574SJX
IC500	8-759-081-42	s	IC TC74VHC00F (EL)
IC501	8-759-186-53	s	IC TC74VHC163F (EL)
IC502	8-759-186-39	s	IC TC74VHC74F (EL)
IC503	8-759-186-39	s	IC TC74VHC74F (EL)
IC600	8-759-386-22	s	IC 74LCX04SJX
IS12	1-540-252-11	s	SOCKET, IC (PLCC)
L1	1-414-441-11	s	INDUCTOR (POWER) 15UH
L2	1-414-441-11	s	INDUCTOR (POWER) 15UH
L3	1-414-441-11	s	INDUCTOR (POWER) 15UH
L4	1-414-441-11	s	INDUCTOR (POWER) 15UH
L5	1-414-529-21	s	INDUCTOR (POWER)
L6	1-414-529-21	s	INDUCTOR (POWER)
L7	1-403-684-11	s	COIL, CHOKE
L8	1-403-684-11	s	COIL, CHOKE
L9	1-409-914-11	s	COIL, CHOKE 10UH
L10	1-409-914-11	s	COIL, CHOKE 10UH
L12	1-414-441-11	s	INDUCTOR (POWER) 15UH
L14	1-403-684-11	s	COIL, CHOKE
L16	1-409-914-11	s	COIL, CHOKE 10UH
L17	1-412-027-11	s	INDUCTOR,CHIP
L18	1-412-027-11	s	INDUCTOR,CHIP
L19	1-412-027-11	s	INDUCTOR,CHIP
L20	1-412-030-11	s	INDUCTOR,CHIP 22UH
L21	1-412-030-11	s	INDUCTOR,CHIP 22UH
L22	1-412-027-11	s	INDUCTOR,CHIP
L23	1-412-030-11	s	INDUCTOR,CHIP 22UH
L24	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L25	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L26	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L27	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L28	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L29	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L30	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L31	1-412-030-11	s	INDUCTOR,CHIP 22UH
L32	1-412-029-11	s	CHIP INDUCTOR 10UH (3225)
L33	1-412-030-11	s	INDUCTOR,CHIP 22UH
L34	1-412-030-11	s	INDUCTOR,CHIP 22UH
L35	1-412-030-11	s	INDUCTOR,CHIP 22UH
L36	1-412-030-11	s	INDUCTOR,CHIP 22UH
L37	1-412-030-11	s	INDUCTOR,CHIP 22UH
L38	1-412-030-11	s	INDUCTOR,CHIP 22UH
L39	1-412-027-11	s	INDUCTOR,CHIP
L40	1-412-030-11	s	INDUCTOR,CHIP 22UH
L41	1-412-033-11	s	CHIP INDUCTOR
Q1	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q2	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q3	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q4	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q5	8-729-216-22	s	TRANSISTOR 2SA1162-G

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Ref. No. or Q'ty	Part No.	SP	Description
Q6	8-729-035-84	s	TRANSISTOR 2SA1385-Z-E2
Q7	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q8	8-729-105-19	s	TRANSISTOR 2SC3518L
Q9	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q10	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q11	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q12	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q13	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q14	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q15	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q16	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q17	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q18	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q19	8-729-206-05	s	TRANSISTOR 2SA1329-O
Q20	8-729-206-08	s	TRANSISTOR 2SC3346-O
Q23	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q25	8-729-206-05	s	TRANSISTOR 2SA1329-O
Q26	8-729-027-57	s	TRANSISTOR DTC143XKA-T146
Q27	8-729-027-57	s	TRANSISTOR DTC143XKA-T146
Q28	8-729-027-57	s	TRANSISTOR DTC143XKA-T146
Q29	8-729-027-57	s	TRANSISTOR DTC143XKA-T146
Q30	8-729-027-57	s	TRANSISTOR DTC143XKA-T146
Q32	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q33	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q34	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q35	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q36	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
R1	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R2	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R3	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R4	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R5	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R6	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R7	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R8	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R9	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R10	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R11	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R12	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2125)
R13	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R14	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R15	1-216-673-11	s	RESISTOR,CHIP 8.2K 1/10W(2125)
R16	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R17	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R18	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R19	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R20	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R21	1-216-635-11	s	RESISTOR CHIP 220 1/10W(2125)
R22	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R23	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R24	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R25	1-216-679-11	s	RESISTOR, METAL FILM CHIP 15K
R26	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R27	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2125)
R28	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R29	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R30	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R31	1-216-681-11	s	RESISTOR, METAL FILM CHIP 18K

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Ref. No. or Q'ty	Part No.	SP	Description
R32	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R33	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R34	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R35	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R37	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R38	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R39	1-216-659-11	s	RESISTOR, CHIP 2.2K 1/10W(2125)
R40	1-216-669-11	s	RESISTOR, METAL FILM CHIP 5.6K
R41	1-216-669-11	s	RESISTOR, METAL FILM CHIP 5.6K
R42	1-216-669-11	s	RESISTOR, METAL FILM CHIP 5.6K
R43	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R44	1-216-659-11	s	RESISTOR, CHIP 2.2K 1/10W(2125)
R45	1-216-667-11	s	RESISTOR, CHIP 4.7K 1/10W(2125)
R46	1-216-635-11	s	RESISTOR CHIP 220 1/10W(2125)
R47	1-216-651-11	s	RESISTOR, CHIP 1K 1/10W(2125)
R48	1-216-651-11	s	RESISTOR, CHIP 1K 1/10W(2125)
R49	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R50	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R51	1-216-669-11	s	RESISTOR, METAL FILM CHIP 5.6K
R52	1-216-669-11	s	RESISTOR, METAL FILM CHIP 5.6K
R53	1-216-687-11	s	RESISTOR, METAL FILM CHIP 33K
R54	1-216-693-11	s	RESISTOR, METAL FILM CHIP 56K
R55	1-216-679-11	s	RESISTOR, METAL FILM CHIP 15K
R56	1-218-760-11	s	RESISTOR, METAL FILM CHIP 220K
R57	1-216-699-11	s	RESISTOR, CHIP 100K 1/10W(2125)
R58	1-216-699-11	s	RESISTOR, CHIP 100K 1/10W(2125)
R59	1-216-699-11	s	RESISTOR, CHIP 100K 1/10W(2125)
R60	1-216-695-11	s	RESISTOR, CHIP 68K 1/10W(2125)
R61	1-216-695-11	s	RESISTOR, CHIP 68K 1/10W(2125)
R62	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R63	1-216-659-11	s	RESISTOR, CHIP 2.2K 1/10W(2125)
R64	1-216-663-11	s	RESISTOR, CHIP 3.3K 1/10W(2125)
R65	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R66	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R67	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R68	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R69	1-216-645-11	s	RESISTOR,CHIP 560 1/10W(2125)
R70	1-216-645-11	s	RESISTOR,CHIP 560 1/10W(2125)
R71	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R72	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R73	1-216-645-11	s	RESISTOR,CHIP 560 1/10W(2125)
R74	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R75	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R79	1-216-671-11	s	RESISTOR,CHIP 6.8K 1/10W(2125)
R80	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R81	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R83	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R85	1-216-669-11	s	RESISTOR, METAL FILM CHIP 5.6K
R87	1-216-679-11	s	RESISTOR, METAL FILM CHIP 15K
R95	1-216-687-11	s	RESISTOR,METAL FILM CHIP 33K
R96	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R97	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R98	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R100	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R103	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R104	1-216-645-11	s	RESISTOR,CHIP 560 1/10W(2125)
R106	1-216-645-11	s	RESISTOR,CHIP 560 1/10W(2125)
R107	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R108	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K

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Ref. No. or Q'ty	Part No.	SP	Description
R109	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R110	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R111	1-216-637-11	s	RESISTOR CHIP 270 1/10W (2125)
R112	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
R113	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
R114	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
R115	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
R116	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R117	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R118	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R119	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R120	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R121	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R122	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R123	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R124	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R125	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R126	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R127	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R128	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R129	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R130	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R131	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R132	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R133	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R134	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R135	1-216-665-11	s	RESISTOR,CHIP 3.9K 1/10W(2125)
R136	1-216-670-11	s	RESISTOR, METAL FILM CHIP 6.2K
R137	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R138	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R139	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R140	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R141	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R142	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R143	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R144	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R145	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R146	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R147	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R148	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R149	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R150	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R151	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R152	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R178	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R179	1-216-621-11	s	RESISTOR,CHIP 56 1/10W(2125)
R180	1-216-621-11	s	RESISTOR,CHIP 56 1/10W(2125)
R181	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R182	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R183	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R184	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R185	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R186	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R190	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R191	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R192	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R193	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R194	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R195	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)

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Ref. No. or Q'ty	Part No.	SP	Description
R196	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2125)
R197	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R198	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R202	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
R203	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R204	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R205	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R206	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R207	1-216-667-11	s	RESISTOR,CHIP 4.7K 1/10W(2125)
R208	1-216-629-11	s	RESISTOR,CHIP 120 1/10W(2125)
R209	1-216-629-11	s	RESISTOR,CHIP 120 1/10W(2125)
R210	1-216-629-11	s	RESISTOR,CHIP 120 1/10W(2125)
R211	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2125)
R212	1-216-631-11	s	RESISTOR,CHIP 150 1/10W(2125)
R213	1-216-631-11	s	RESISTOR,CHIP 150 1/10W(2125)
R214	1-216-631-11	s	RESISTOR,CHIP 150 1/10W(2125)
R215	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R216	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2125)
R217	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R218	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2125)
R219	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R220	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2125)
R221	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R222	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R223	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R224	1-216-614-11	s	RESISTOR,CHIP 30 1/10W (2125)
R225	1-216-614-11	s	RESISTOR,CHIP 30 1/10W (2125)
R226	1-216-614-11	s	RESISTOR,CHIP 30 1/10W (2125)
R227	1-216-641-11	s	RESISTOR,CHIP 390 1/10W(2125)
R228	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R229	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R230	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
R231	1-216-629-11	s	RESISTOR,CHIP 120 1/10W(2125)
R233	1-216-673-11	s	RESISTOR,CHIP 8.2K 1/10W(2125)
R234	1-216-629-11	s	RESISTOR,CHIP 120 1/10W(2125)
R236	1-216-673-11	s	RESISTOR,CHIP 8.2K 1/10W(2125)
R237	1-216-629-11	s	RESISTOR,CHIP 120 1/10W(2125)
R238	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R239	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R240	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R241	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R242	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R243	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R244	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R245	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R246	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R247	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R248	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R249	1-216-685-11	s	RESISTOR,CHIP 27K 1/10W(2125)
R250	1-216-685-11	s	RESISTOR,CHIP 27K 1/10W(2125)
R251	1-216-685-11	s	RESISTOR,CHIP 27K 1/10W(2125)
R252	1-216-649-11	s	RESISTOR,CHIP 820 1/10W(2125)
R253	1-216-661-11	s	RESISTOR,CHIP 2.7K 1/10W(2125)
R254	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R255	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R256	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R257	1-216-655-11	s	RESISTOR,CHIP 1.5K 1/10W(2125)
R258	1-216-655-11	s	RESISTOR,CHIP 1.5K 1/10W(2125)
R259	1-216-661-11	s	RESISTOR,CHIP 2.7K 1/10W(2125)

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Ref. No. or Q'ty	Part No.	SP	Description
R260	1-216-641-11	s	RESISTOR,CHIP 390 1/10W(2125)
R261	1-216-657-11	s	RESISTOR,CHIP 1.8K 1/10W(2125)
R262	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R263	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R264	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R265	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R266	1-216-635-11	s	RESISTOR CHIP 220 1/10W(2125)
R267	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R268	1-216-645-11	s	RESISTOR,CHIP 560 1/10W(2125)
R269	1-216-665-11	s	RESISTOR,CHIP 3.9K 1/10W(2125)
R270	1-216-657-11	s	RESISTOR,CHIP 1.8K 1/10W(2125)
R271	1-216-641-11	s	RESISTOR,CHIP 390 1/10W(2125)
R272	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R273	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R274	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R275	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R276	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
R277	1-216-645-11	s	RESISTOR,CHIP 560 1/10W(2125)
R278	1-216-645-11	s	RESISTOR,CHIP 560 1/10W(2125)
R279	1-216-649-11	s	RESISTOR,CHIP 820 1/10W(2125)
R280	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2125)
R281	1-216-661-11	s	RESISTOR,CHIP 2.7K 1/10W(2125)
R282	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
R283	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R284	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R285	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R286	1-218-754-11	s	RESISTOR,METAL CHIP 120K(2125)
R287	1-218-754-11	s	RESISTOR,METAL CHIP 120K(2125)
R288	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R289	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R290	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R291	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R292	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R293	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R294	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R295	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R296	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R297	1-216-659-11	s	RESISTOR,CHIP 2.2K 1/10W(2125)
R298	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R299	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R300	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R301	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R302	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R303	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R304	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R305	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R306	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R307	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R308	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R309	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R310	1-216-643-11	s	RESISTOR, METAL FILM CHIP 470
R311	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R312	1-216-633-11	s	RESISTOR,CHIP 180 1/10W (2125)
R313	1-216-633-11	s	RESISTOR,CHIP 180 1/10W (2125)
R314	1-216-633-11	s	RESISTOR,CHIP 180 1/10W (2125)
R315	1-216-633-11	s	RESISTOR,CHIP 180 1/10W (2125)
R316	1-216-633-11	s	RESISTOR,CHIP 180 1/10W (2125)
R317	1-216-633-11	s	RESISTOR,CHIP 180 1/10W (2125)
R318	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)

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Ref. No. or Q'ty	Part No.	SP	Description
R319	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R320	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R321	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R322	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R323	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R324	1-216-663-11	s	RESISTOR,CHIP 3.3K 1/10W(2125)
R325	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R326	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R327	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R328	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R329	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R330	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R331	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R332	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R333	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R334	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R335	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R336	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R337	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R338	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R339	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R340	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R341	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R342	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R343	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R344	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R345	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R346	1-216-695-11	s	RESISTOR,CHIP 68K 1/10W(2125)
R347	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R348	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R349	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R350	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R351	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R352	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R353	1-216-623-11	s	RESISTOR,CHIP 68 1/10W(2125)
R354	1-216-623-11	s	RESISTOR,CHIP 68 1/10W(2125)
R355	1-216-623-11	s	RESISTOR,CHIP 68 1/10W(2125)
R356	1-216-623-11	s	RESISTOR,CHIP 68 1/10W(2125)
R357	1-216-623-11	s	RESISTOR,CHIP 68 1/10W(2125)
R358	1-216-623-11	s	RESISTOR,CHIP 68 1/10W(2125)
R359	1-216-623-11	s	RESISTOR,CHIP 68 1/10W(2125)
R360	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2125)
R361	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2125)
R362	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2125)
R363	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2125)
R364	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2125)
R365	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2125)
R366	1-216-624-11	s	RESISTOR,CHIP 75 1/10W(2125)
R367	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R368	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R369	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R370	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R371	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R379	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R380	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R381	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R386	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R387	1-216-687-11	s	RESISTOR,METAL FILM CHIP 33K
R388	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K

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Ref. No. or Q'ty	Part No.	SP	Description
R389	1-216-687-11	s	RESISTOR,METAL FILM CHIP 33K
R390	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R391	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R392	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R393	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R394	1-216-693-11	s	RESISTOR, METAL FILM CHIP 56K
R395	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R396	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R397	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R398	1-216-673-11	s	RESISTOR,CHIP 8.2K 1/10W(2125)
R399	1-216-603-11	s	RESISTOR,CHIP 10 1/10W(2125)
R409	1-216-697-91	s	RESISTOR,CHIP 82K 1/10W(2125)
R410	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R411	1-216-639-11	s	RESISTOR,CHIP 330 1/10W(2125)
R412	1-216-669-11	s	RESISTOR, METAL FILM CHIP 5.6K
R413	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R414	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2125)
R415	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R416	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R417	1-216-627-11	s	RESISTOR,CHIP 100 1/10W(2125)
R418	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R420	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
R421	1-216-651-11	s	RESISTOR,CHIP 1K 1/10W(2125)
R422	1-216-675-11	s	RESISTOR, METAL FILM CHIP 10K
R424	1-216-683-11	s	RESISTOR, METAL FILM CHIP 22K
R489	1-216-665-11	s	RESISTOR, CHIP 3.9K 1/10W(2125)
R490	1-216-670-11	s	RESISTOR, METAL FILM CHIP 6.2K
R500	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R501	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R502	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R504	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
R507	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R508	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R509	1-216-647-11	s	RESISTOR, CHIP 680 1/10W(2125)
R510	1-216-699-11	s	RESISTOR, CHIP 100K 1/10W(2125)
R511	1-216-699-11	s	RESISTOR, CHIP 100K 1/10W(2125)
R600	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
R601	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
R602	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
R603	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
R604	1-216-679-11	s	RESISTOR, METAL FILM CHIP 15K
R605	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
R606	1-216-639-11	s	RESISTOR, CHIP 330 1/10W(2125)
R607	1-216-639-11	s	RESISTOR, CHIP 330 1/10W(2125)
R608	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R609	1-216-621-11	s	RESISTOR, CHIP 56 1/10W(2125)
R611	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RB1	1-239-412-11	s	NETWORK, RESISTOR(CHIP TYPE)
RB2	1-239-412-11	s	NETWORK, RESISTOR(CHIP TYPE)
RB3	1-239-412-11	s	NETWORK, RESISTOR(CHIP TYPE)
RB4	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB5	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB6	1-239-308-11	s	RESISTOR ARRAY,CHIP 47K
RB7	1-239-309-11	s	RESISTOR ARRAY,CHIP 100K
RB8	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB9	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB10	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB11	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22

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Ref. No. or Q'ty	Part No.	SP	Description
RB12	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB13	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB14	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB15	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB16	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB500	1-239-309-11	s	RESISTOR ARRAY, CHIP 100K
RB501	1-239-309-11	s	RESISTOR ARRAY, CHIP 100K
RB502	1-239-309-11	s	RESISTOR ARRAY, CHIP 100K
RB600	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB601	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RB602	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
RS4	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS9	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS10	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS13	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS14	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS15	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS17	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS23	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS25	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS27	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RS30	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RV1	1-237-032-11	s	RESISTOR, ADJ, CERMET 500
RV2	1-237-032-11	s	RESISTOR, ADJ, CERMET 500
RV3	1-237-032-11	s	RESISTOR, ADJ, CERMET 500
RV4	1-228-473-00	s	RESISTOR, ADJ, 5K
RV5	1-237-032-11	s	RESISTOR, ADJ, CERMET 500
RV6	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV7	1-237-034-11	s	RESISTOR, ADJ, CERMET 2K
RV8	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV9	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV10	1-237-032-11	s	RESISTOR, ADJ, CERMET 500
RV11	1-237-032-11	s	RESISTOR, ADJ, CERMET 500
RV12	1-237-032-11	s	RESISTOR, ADJ, CERMET 500
RV14	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV15	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV16	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV17	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV18	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV19	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV20	1-237-031-11	s	RESISTOR, ADJ, CERMET 200
RV600	1-237-034-11	s	RESISTOR, ADJ, CERMET 2K
S1	1-572-658-21	s	SWITCH, ROTARY
S2	1-572-658-21	s	SWITCH, ROTARY
S3	1-692-271-31	s	SWITCH, SLIDE
S4	1-692-530-11	s	SWITCH, TOGGLE
S5	1-692-530-11	s	SWITCH, TOGGLE
S6	1-570-711-11	s	SWITCH, SLIDE
S7	1-570-711-11	s	SWITCH, SLIDE
S8	1-572-005-11	s	SWITCH, TACTIL(REFLOW TYPE)
S9	1-692-530-11	s	SWITCH, TOGGLE
X1	1-579-594-11	s	VIBRATOR, CRYSTAL
X2	1-577-597-11	s	OSCILLATOR,CRYSTAL

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DA-126 SUB BOARD (Serial No. 30101 through 30300)
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 Ref. No.
 or Q'ty  Part No.    SP Description

 C1       1-104-851-11 s CAPACITOR, TANTALUM 10uF 10V
 C2       1-163-038-91 s CAPACITOR, CERAMIC 0.1uF 25V
 C3       1-163-038-91 s CAPACITOR, CERAMIC 0.1uF 25V
 C4       1-163-038-91 s CAPACITOR, CERAMIC 0.1uF 25V

 IC1      8-759-081-42 s IC TC74VHC00F
 IC2      8-759-186-53 s IC TC74VHC163F
 IC3      8-759-186-39 s IC TC74VHC74F

 L1       1-408-781-00 s CHIP, INDUCTOR 22UH 4532

 R1       1-216-841-11 s RESISTOR, CHIP 47K 1/16W 1608
 R2       1-216-864-11 s RESISTOR, CHIP 0
 R3       1-216-841-11 s RESISTOR, CHIP 47K 1/16W 1608
 R5       1-216-797-11 s RESISTOR, CHIP 10 1/16W 1608
 R6       1-216-797-11 s RESISTOR, CHIP 10 1/16W 1608



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DIF-62 BOARD
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Ref. No.
or Q'ty    Part No.    SP Description

1pc        A-8313-797-A o MOUNTED C. BOARD DIF-62
1pc        3-608-261-01 o COVER,SHIELD CASE(1)
1pc        3-608-270-01 o PANEL(102),CONNECTOR
2pcs       7-621-259-18 s SCREW +P2.6X3(EP-CU/NIBK)
2pcs       7-682-947-01 s SCREW +PSW 3X6(EP-FE/ZN/CM2)

2pcs       7-685-647-79 s SCREW +BVTP3X10(EP-FE/ZNBK/CM2

CN1        1-563-341-11 s CONNECTOR HOUSING
CN4        1-764-273-11 s CONNECTOR, COAXIAL (BNC TYPE)
CN5        1-764-273-11 s CONNECTOR, COAXIAL (BNC TYPE)
CN6        1-764-273-11 s CONNECTOR, COAXIAL (BNC TYPE)
CN7        1-764-273-11 s CONNECTOR, COAXIAL (BNC TYPE)

CN8        1-764-273-11 s CONNECTOR, COAXIAL (BNC TYPE)
CN9        1-764-273-11 s CONNECTOR, COAXIAL (BNC TYPE)
CN10       1-764-273-11 s CONNECTOR, COAXIAL (BNC TYPE)
CN11       1-764-273-11 s CONNECTOR, COAXIAL (BNC TYPE)
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4-3. Supplied Accessory

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Ref. No.
or Q'ty    Part No.    SP Description

1pc      ⚠ 1-576-228-11 s FUSE (H.B.C)
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4-4. Tools and Fixtures

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Part No.     SP Description

J-6185-960-A  o EXTENSION BOARD, EX-331
J-6035-070-A  o EXTRACTION TOOL, IC (CT-2101)
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4-5. Changed Parts

Parts listed in this section have been changed depending on serial number of the unit.
Numerics at "Mark" column show the serial number.

Applicable serial numbers:
--- Shows higher serial numbers than listed just below (including 11000 range)
803 Up to 12000(UCJ)
709 Up to 11100(UCJ), Up to 30500(J)
707 Up to 30500(J)
705 Up to 30300(J)
703 Up to 30200(J)
612 Up to 30100(J)

DA-126 SUB BOARD

The DA-126 sub board is only supplied with HKPF-102 with serial No. 30101 through 30300.

DA-126 BOARD

Ref.No /Q'ty	Mark	Part No.	SP	Description
C22	---	1-135-076-21	s	CAPACITOR, TANTALUM 1.0MF/35V
	705	1-135-211-11	s	CAPACITOR, TANTAL 6.8MF/6.3V
C138	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	612	Not in use.		
C139	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	612	Not in use.		
C140	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C141	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C143	---	1-163-229-11	s	CAPACITOR, CHIP 12PF/50V(2125)
	612	Not in use.		
C204	---	1-163-082-00	s	CAPACITOR,CHIP CERAMIC 0.5PF
	709	Not in use.		
C205	---	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
	612	Not in use.		
C206	---	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
	612	Not in use.		
C218	---	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
	612	Not in use.		
C219	---	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
	612	Not in use.		
C226	---	Not in use.		
	612	1-163-085-00	s	CAPACITOR, CHIP CERAMIC 2.0PF
C228	---	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
	709	1-163-082-00	s	CAPACITOR, CHIP CERAMIC 0.5PF
C267	---	1-163-084-00	s	CAPACITOR, CHIP CERAMIC 1.5PF
	612	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
C268	---	1-163-084-00	s	CAPACITOR, CHIP CERAMIC 1.5PF
	612	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
C269	---	1-163-084-00	s	CAPACITOR, CHIP CERAMIC 1.5PF
	612	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
C270	---	1-163-084-00	s	CAPACITOR, CHIP CERAMIC 1.5PF
	612	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
C271	---	1-163-084-00	s	CAPACITOR, CHIP CERAMIC 1.5PF
	612	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
C272	---	1-163-084-00	s	CAPACITOR, CHIP CERAMIC 1.5PF
	612	1-163-217-11	s	CAPACITOR, CHIP CERAMIC 1.0PF
C450	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1PF/25V
	612	Not in use.		
C500	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C501	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C502	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C503	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C504	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C505	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C506	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C507	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C508	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C509	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		

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Ref.No /Q'ty	Mark	Part No.	SP	Description
C510	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	705	Not in use.		
C600	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C601	---	1-163-220-11	s	CAPACITOR, CHIP CERAMIC 3.0PF
	709	1-163-222-11	s	CAPACITOR, CHIP CERAMIC 5.0PF
	709	Not in use.		
C602	---	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
	709	Not in use.		
C603	---	1-163-227-11	s	CAPACITOR CERAMIC 10PF/50V(CH)
	709	Not in use.		
C604	---	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
	709	Not in use.		
C605	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C606	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C607	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C608	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C609	---	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
	709	Not in use.		
C610	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C611	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C612	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C613	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C614	---	1-104-851-11	s	CAPACITOR,TANTALUM 10MF/10V
	709	Not in use.		
C615	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C616	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C617	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C618	---	1-163-009-11	s	CAPACITOR, CHIP CERAMIC 1000PF
	709	Not in use.		
C619	---	1-163-038-91	s	CAPACITOR, CERAMIC 0.1MF/25V
	709	Not in use.		
D25	---	8-719-801-78	s	DIODE 1SS184
	612	Not in use.		
IC15	---	8-759-497-30	s	IC LC35256DT-10-TLM
	709	8-752-371-35	s	IC CXK58257BTM-10LL
IC74	---	Not in use.		
	612	8-759-081-49	s	IC TC74VHC08F (EL)
IC75	---	Not in use.		
	612	8-759-185-71	s	IC TC74VHCT74F (EL)
IC76	---	Not in use.		
	612	8-759-185-71	s	IC TC74VHCT74F (EL)
IC82	---	Not in use.		
	705	8-759-037-79	s	IC MC74HC163AF
IC500	---	8-759-081-42	s	IC TC74VHC00F (EL)
	705	Not in use.		
IC501	---	8-759-186-53	s	IC TC74VHC163F (EL)
	705	Not in use.		
IC502	---	8-759-186-39	s	IC TC74VHC74F (EL)
	705	Not in use.		
IC503	---	8-759-186-39	s	IC TC74VHC74F (EL)
	705	Not in use.		
IC600	---	8-759-386-22	s	IC 74LCX04SJX
	709	Not in use.		

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Ref.No /Q'ty	Mark	Part No.	SP	Description
Q36	---	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
	612	Not in use.		
R31	---	1-216-681-11	s	RES, METAL CHIP 18K
	612	1-216-675-11	s	RES, METAL CHIP 10K
R54	---	1-216-693-11	s	RESISTOR, METAL FILM CHIP 56K
	705	1-216-695-11	s	RESISTOR, CHIP 68K 1/10W(2125)
R186	---	1-216-295-91	s	RES, CHIP 0 (1/10W)
	705	Not in use.		
R192	---	1-216-683-11	s	RES, METAL CHIP 22K
	612	Not in use.		
R193	---	1-216-683-11	s	RES, METAL CHIP 22K
	612	Not in use.		
R194	---	1-216-675-11	s	RES, METAL CHIP 10K
	612	Not in use.		
R195	---	1-216-651-11	s	RES, CHIP 1K 1/10W (2125)
	612	Not in use.		
R196	---	1-216-624-11	s	RES, CHIP 75 1/10W (2125)
	612	Not in use.		
R197	---	1-216-683-11	s	RES, METAL CHIP 22K
	612	Not in use.		
R198	---	1-216-683-11	s	RES, METAL CHIP 22K
	612	Not in use.		
R227	---	1-216-641-11	s	RESISTOR,CHIP 390 1/10W(2125)
	709	1-216-649-11	s	RESISTOR,CHIP 820 1/10W(2125)
R230	---	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
	709	1-216-659-11	s	RESISTOR, CHIP 2.2K 1/10W(2125)
	709	1-216-699-11	s	RESISTOR, CHIP 100K 1/10W(2125)
R253	---	1-216-661-11	s	RESISTOR, CHIP 2.7K 1/10W(2125)
	707	1-216-671-11	s	RESISOTR, CHIP 6.8K 1/10W(2125)
R254	---	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
	612	Not in use.		
R255	---	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
	612	Not in use.		
R256	---	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	709	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R284	---	1-216-651-11	s	RESISTOR, CHIP 1K 1/10W(2125)
	612	1-216-653-11	s	RESISTOR, METAL FILM CHIP 1.2K
R409	---	1-216-697-91	s	RESISTOR, CHIP 82K 1/10W(2125)
	709	1-216-627-11	s	RESISTOR, CHIP 100 1/10W(2125)
R419	---	Not in use.		
	705	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
R500	---	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
	705	Not in use.		
R501	---	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
	705	Not in use.		
R502	---	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
	705	Not in use.		
R503	---	Not in use.		
	707	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	705	Not in use.		
R504	---	1-216-691-11	s	RESISTOR, METAL FILM CHIP 47K
	705	Not in use.		
R507	---	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	705	Not in use.		
R508	---	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	705	Not in use.		
R509	---	1-216-647-11	s	RESISTOR,CHIP 680 1/10W(2125)
	705	Not in use.		
R510	---	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
	705	Not in use.		
R511	---	1-216-699-11	s	RESISTOR,CHIP 100K 1/10W(2125)
	705	Not in use.		
R600	---	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
	709	Not in use.		

(DA-126 BOARD)

Ref.No /Q'ty	Mark	Part No.	SP	Description
R601	---	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
	709	Not in use.		
R602	---	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
	709	Not in use.		
R603	---	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
	709	Not in use.		
R604	---	1-216-679-11	s	RESISTOR, METAL FILM CHIP 15K
	709	Not in use.		
R605	---	1-216-603-11	s	RESISTOR, CHIP 10 1/10W(2125)
	709	Not in use.		
R606	---	1-216-639-11	s	RESISTOR, CHIP 330 1/10W(2125)
	709	Not in use.		
R607	---	1-216-639-11	s	RESISTOR, CHIP 330 1/10W(2125)
	709	Not in use.		
R608	---	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	707	Not in use.		
R609	---	1-216-621-11	s	RESISTOR, CHIP 56 1/10W(2125)
	709	Not in use.		
R611	---	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	707	Not in use.		
R901	---	Not in use.		
	612	1-216-683-11	s	RES, METAL CHIP 22K
R902	---	Not in use.		
	612	1-216-683-11	s	RES, METAL CHIP 22K
R903	---	Not in use.		
	612	1-216-683-11	s	RES, METAL CHIP 22K
R904	---	Not in use.		
	612	1-216-683-11	s	RES, METAL CHIP 22K
R905	---	Not in use.		
	612	1-216-683-11	s	RES, METAL CHIP 22K
R906	---	Not in use.		
	612	1-216-683-11	s	RES, METAL CHIP 22K
RB500	---	1-239-309-11	s	RESISTOR ARRAY, CHIP 100K
	705	Not in use.		
RB501	---	1-239-309-11	s	RESISTOR ARRAY, CHIP 100K
	705	Not in use.		
RB502	---	1-239-309-11	s	RESISTOR ARRAY, CHIP 100K
	705	Not in use.		
RB600	---	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
	709	Not in use.		
RB601	---	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
	709	Not in use.		
RB602	---	1-239-621-11	s	NETWORK RESISTOR (CHIP) 22
	709	Not in use.		
RS22	---	Not in use.		
	707	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	705	Not in use.		
RS25	---	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	612	1-216-627-11	s	RESISTOR, CHIP 100 1/10W(2125)
RS29	---	Not in use.		
	705	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	612	Not in use.		
RS30	---	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
	705	Not in use.		
	612	1-216-295-91	s	RESISTOR, CHIP 0 (1/10W)
RV7	---	1-237-034-11	s	RESISTOR, ADJ, CERMET 2K
	803	1-237-032-11	s	RESISTOR, ADJ, CERMET 500
RV600	---	1-237-034-11	s	RESISTOR, ADJ, CERMET 2K
	709	Not in use.		

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Section 5
Semiconductor Pin Assignments

ここに記載されている半導体は，それぞれの機能を等価的に表したものです。　なお，互換性のない型名を併記していることがありますので，部品を交換するときは，Spare Partsの章を参照してください。
等価回路はＩＣメーカーのデータブックに従いました。

Semiconductors of which functions are equivalent are described here. For parts replacement, refer to the section of Spare Parts in this manual. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

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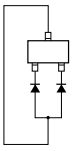
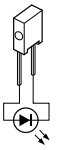
DIODE

-TOP VIEW-

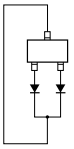


1S2835-T1
1S2836



HLMP-6300-010 ;RED
HLMP-6500-010 ;GREEN

-TOP VIEW-

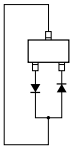


1S2837-T1
1SS184

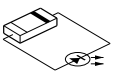
-TOP VIEW-

RD4.7M-B
RD4.7M-T1B

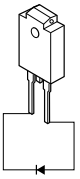
-TOP VIEW-



1SS123-T1
1SS226
DA204U
MA3J74200LSO



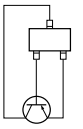
CL-150PG-CD ;GREEN



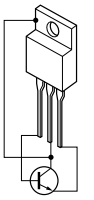
ERC62M-004

TRANSISTOR

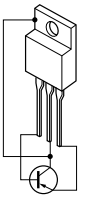
-TOP VIEW-



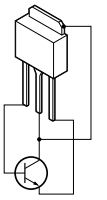
2SA1162G
2SA1226-E4
2SA1610-T1Y34
2SA1610-Y33
2SA812-T1-M5M6



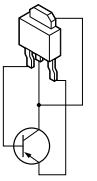
2SC3345-Y
2SC3346-O



2SA1328-Y
2SA1329-O

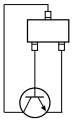


2SC3518-L
2SC3518-ZL-E2



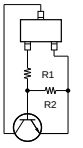
2SA1385-Z-E2

-TOP VIEW-



2SC1623
2SC1623-T1-L5L6
2SC3356-K
2SC3356-T1K
2SC4176-B34
2SC4177-L6
2SC4177-T1L5L6

-TOP VIEW-

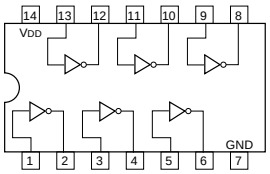


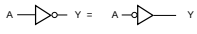
DTC143XKA-T146 (R1 = 4.7 K,R2 = 10 K)

IC

74LCX04SJX (NS)FLAT PACKAGE
SN74HC04ANS (TI)FLAT PACKAGE
TC74VHC04F (TOSHIBA)FLAT PACKAGE
TC74VHCT04F(EL) (TOSHIBA)FLAT PACKAGE

C-MOS HEX INVERTERS
-TOP VIEW-





$Y = \overline{A}$

A	Y
0	1
1	0

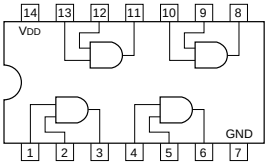
0 ; LOW LEVEL
1 ; HIGH LEVEL

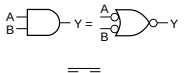
NOTE:

TYPE	VDD
74AC/74VHC/74VHCT	+2 to +5.5V
74ACT/74HCT	+4.5 to +5.5V
74LCX	+2 to +3.6V
OTHER TYPE	+2 to +6V

74LCX08SJX (NS)FLAT PACKAGE
TC74VHC08F(EL) (TOSHIBA)
TC74VHC08FS(EL) (TOSHIBA)FLAT PACKAGE(SMALL)
TC74VHCT08F(EL) (TOSHIBA)FLAT PACKAGE

C-MOS QUAD 2-INPUT AND GATE
- TOP VIEW -





$Y = A \bullet B = \overline{\overline{A} + \overline{B}}$

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

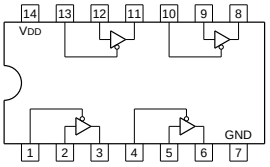
0 ; LOW LEVEL
1 ; HIGH LEVEL

NOTE;

TYPE	VDD
74AC	+2 to +5.5V
40H	+2 to +8V
74ACT/74HCT/74VHCT	+4.5 to +5.5V
74LCX	+2 to +3.6V
OTHER TYPES	+2 to +6V

74LCX125SJX (NS)FLAT PACKAGE
TC74VHC125F (TOSHIBA)FLAT PACKAGE
TC74VHC125F(EL)

C-MOS BUS BUFFER GATES WITH 3-STATE OUTPUT
-TOP VIEW-



G	A	Y
0	0	0
0	1	1
1	X	HI-Z

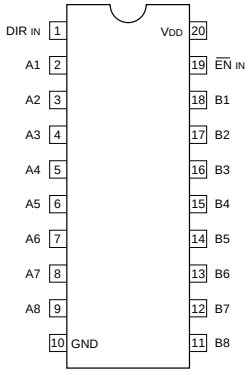
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

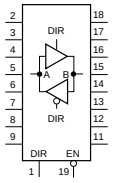
NOTE :

TYPE	VDD
74AC/74VHC	+2 to +5.5V
74ACT/74HCT	+4.5 to +5.5V
74LCX	+2 to +3.6V
74LVT/74LVC	+2.7 to +3.6V
OTHER TYPES	+2 to +6V

74LCX245SJX (NS)FLAT PACKAGE

C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUTS
-TOP VIEW-



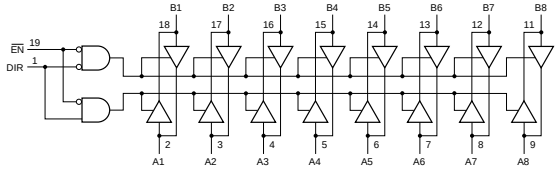


EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

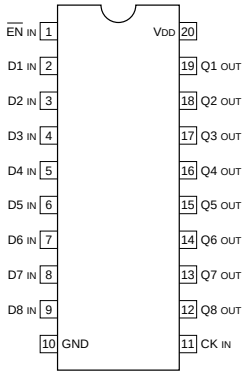
NOTE:

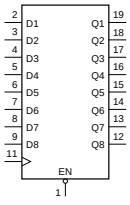
TYPE	VDD
74HC	+2 to +6V
74ABT 74ACT 74BCT 74HCT	+4.5 to +5.5V
74AC 74VHC	+2 to +5.5V
74LCX	+2 to +3.6V
74LVT	+2.7 to +3.6V



74LCX574SJX (NS)FLAT PACKAGE
74VHCT574SJX (NS)FLAT PACKAGE

C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP
-TOP VIEW-

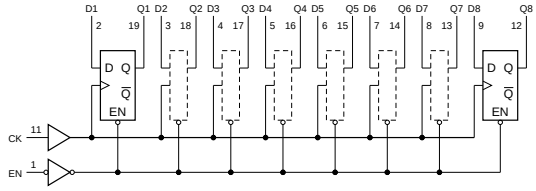




EACH FLIP-FLOP

INPUTS				OUT
EN	CK	D	Q	
0	↑	1	1	
0	↑	0	0	
0	↓	X	Q_0	
1	X	X	HI-Z	

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE
Q_0 ; NO CHANGE

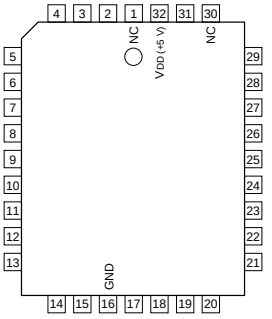


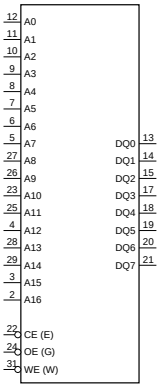
NOTE;

TYPE	VDD
74HC	+2 to +6V
74AC/74VHC	+2 to +5.5V
74ACT/74FCT 74HCT/74VHCT	+4.5 to +5.5V
74LCX	+2 to +3.6V
74LVC	+2.7 to +3.6V

AM29F010-120JC (AMD)

C-MOS 1M (131072x8)-BIT FLASH EEPROM
— TOP VIEW —





(VDD = +5 V)

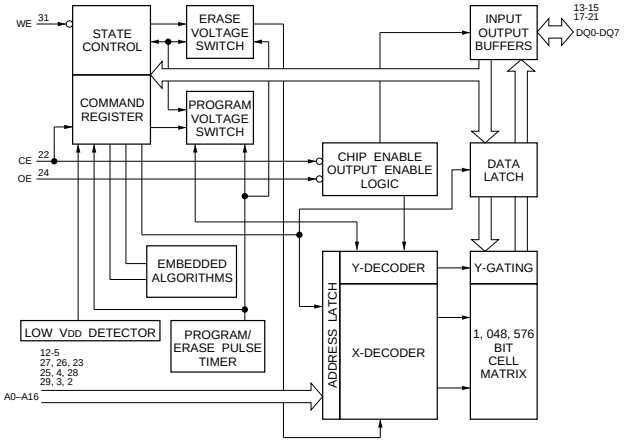
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	—	NC	17	I/O	DQ3
2	I	A16	18	I/O	DQ4
3	I	A15	19	I/O	DQ5
4	I	A12	20	I/O	DQ6
5	I	A7	21	I/O	DQ7
6	I	A6	22	I	$\overline{CE}$ ($\overline{E}$)
7	I	A5	23	I	A10
8	I	A4	24	I	$\overline{OE}$ ($\overline{G}$)
9	I	A3	25	I	A11
10	I	A2	26	I	A9
11	I	A1	27	I	A8
12	I	A0	28	I	A13
13	I/O	DQ0	29	I	A14
14	I/O	DQ1	30	—	NC
15	I/O	DQ2	31	I	$\overline{WE}$ ($\overline{W}$)
16	—	GND	32	—	VDD

INPUT
A0-A16 ; ADDRESS (0-16)
CE ; CHIP ENABLE
OE ; OUTPUT ENABLE
WE ; WRITE ENABLE

OUTPUT
DQ0-DQ7 ; DATA (0-7)

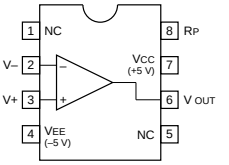
OPERATION	$\overline{CE}$	$\overline{OE}$	$\overline{WE}$	A0	A1	A9	I/O
AUTO-SELECT MANUFACTURER CODE (1)	0	0	1	0	0	VID	CODE
AUTO-SELECT DEVICE CODE (1)	0	0	1	1	0	VID	CODE
READ	0	0	1	A0	A1	A9	DOUT
STANDBY	1	X	X	X	X	X	HI-Z
OUTPUT DISABLE	0	1	1	X	X	X	HI-Z
WRITE	0	1	0	A0	A1	A9	DIN (2)
ENABLE SECTOR PROTECT	0	VID	0	X	X	VID	X
VERIFY SECTOR PROTECT (3)	0	0	1	0	1	VID	CODE

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE



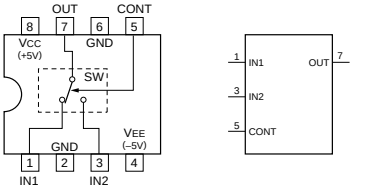
CLC505AJE (COMLINEAR)FLAT PACKAGE

OPERATIONAL AMPLIFIER
— TOP VIEW —



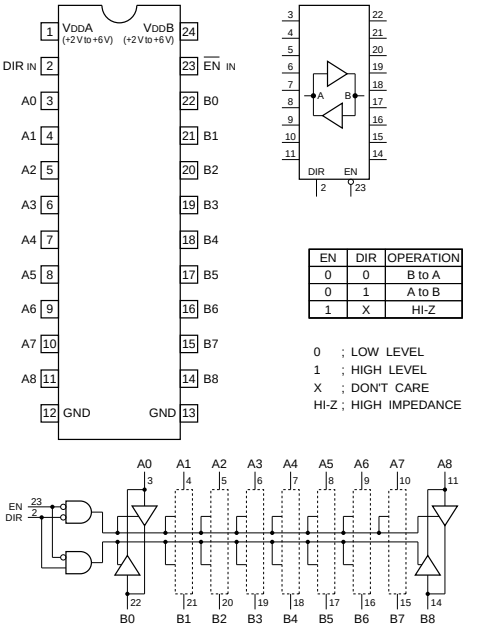
CXA1450M-TH (SONY)FLAT PACKAGE

VIDEO SIGNAL SWITCH
-TOP VIEW-



HD151015T (HITACHI)FLAT PACKAGE
HD151015TEL

C-MOS 9-BIT LEVEL SHIFTER/TRANSCEIVER WITH 3-STATE OUTPUTS
— TOP VIEW —



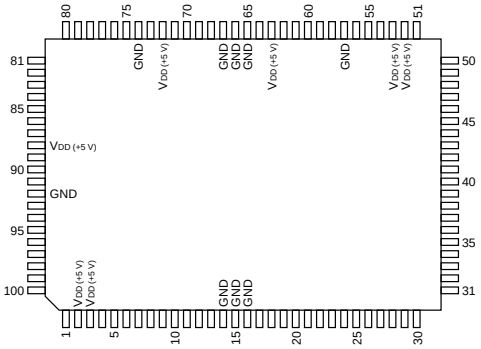
EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

CXD8953Q (SONY)

C-MOS ERROR DETECTION AND HANDLING

- TOP VIEW -



(VDD = +5 V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	O	TEST0	21	I	IDATA8	41	I	TEST6	61	O	ODATA8	81	O	APERR
2	—	VDD	22	I	IDATA9	42	I	A3	62	O	ODATA7	82	O	FFERR
3	—	VDD	23	I	FORM0	43	I	A2	63	—	VDD	83	O	ANCER
4	O	TEST1	24	I	FORM1	44	I	A1	64	O	ODATA6	84	I/O	ANCEDH
5	O	TEST2	25	I	AUTO	45	I	A0	65	—	GND	85	I/O	ANCEDA
6	I	TEST3	26	I	MODE0	46	I	$\overline{\text{WRITE}}$	66	—	GND	86	I/O	ANCIDH
7	I	TEST4	27	I	MODE1	47	I	$\overline{\text{READ}}$	67	—	GND	87	I/O	ANCIDA
8	O	TEST5	28	I	MODE2	48	I	$\overline{\text{CS}}$	68	O	ODATA5	88	—	VDD
9	I	ICLOCK	29	O	OTHANC	49	O	TEST7	69	O	ODATA4	89	I/O	ANCUES
10	I	IDATA0	30	O	EDHVLD	50	I	TEST8	70	O	ODATA3	90	I/O	APEDH
11	I	IDATA1	31	O	DPR	51	I	$\overline{\text{RESET}}$	71	O	ODATA2	91	I/O	APEDA
12	I	IDATA2	32	O	INTR	52	—	VDD	72	—	VDD	92	—	GND
13	I	IDATA3	33	I/O	D7	53	—	VDD	73	O	ODATA1	93	I/O	APIDH
14	—	GND	34	I/O	D6	54	O	TEST9	74	—	GND	94	I/O	APIDA
15	—	GND	35	I/O	D5	55	O	TEST10	75	O	ODATA0	95	I/O	APUES
16	—	GND	36	I/O	D4	56	O	TEST11	76	O	TEST13	96	I/O	FFEDH
17	I	IDATA4	37	I/O	D3	57	—	GND	77	O	OD1	97	I/O	FFEDA
18	I	IDATA5	38	I/O	D2	58	O	TEST12	78	O	OL525	98	I/O	FFIDH
19	I	IDATA6	39	I/O	D1	59	O	OCLOCK	79	I	TEST14	99	I/O	FFIDA
20	I	IDATA7	40	I/O	D0	60	O	ODATA9	80	I	TEST15	100	I/O	FFUES

INPUT

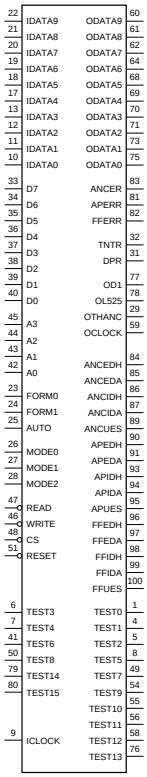
A0 - A3	; ADDRESS
$\overline{\text{AUTO}}$	; AUTO DETECT
$\overline{\text{CS}}$	; CHIP SELECT
FORM0, FORM1	; VIDEO FORMAT
ICLOCK	; CLOCK
IDATA0 - IDATA9	; VIDEO DATA
MODE0	; 1 = Detect each FLAG and calculate CRC. Add the result and output. 0 = Input each FLAG from outside and calculate CRC. Add the result and output.
MODE1	; 1 = If other ANCILLARY DATA existe EDH, such as AUDIO, no EDH is added. 0 = EDH is added unconditionally.
MODE2	; MODE SELECT
$\overline{\text{READ}}$	; READ
$\overline{\text{RESET}}$	; RESET
TEST3, TEST4, TEST6, TEST8, TEST14, TEST15	; TEST
$\overline{\text{WRITE}}$	; WRITE

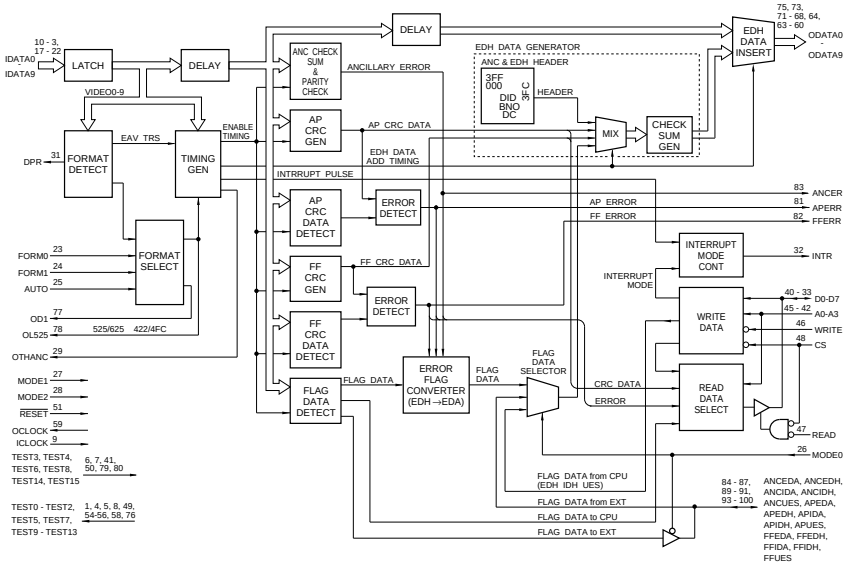
OUTPUT

ANCER	; ANCILLARY DATA ERROR
APERR	; ACTIVE PICTURE ERROR
DPR	; INPUT SIGNAL DETECT
EDHVLB	; ERROR DETECTION & HANDLING CORRESPOND DETECT
FFERR	; FULL FIELD ERROR
INTR	; INTERRUPT
OCLOCK	; OUTPUT CLOCK
OD1	; D1/D2 FORMAT SELECT
ODATA0 - ODATA9	; OUTPUT DATA
OL525	; 525/625, 422/4FC FORMAT SELECT
OTHANC	; OTHER ANC DATA DETECT
TEST0 - TEST2, TEST5, TEST7, TEST9 - TEST13	; TEST

INPUT / OUTPUT

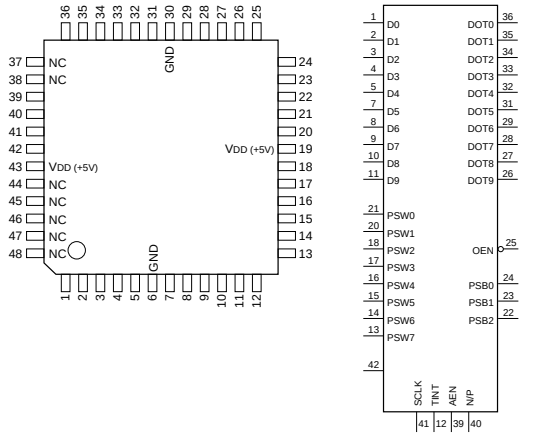
ANCEDA	; ANCILLARY EDA FLAG
ANCEDH	; ANCILLARY EDH FLAG
ANCIDA	; ANCILLARY IDA FLAG
ANCIDH	; ANCILLARY IDH FLAG
ANCUES	; ANCILLARY UES FLAG
APEDA	; ACTIVE PICTURE EDA FLAG
APEDH	; ACTIVE PICTURE EDH FLAG
APIDA	; ACTIVE PICTURE IDA FLAG
APIDH	; ACTIVE PICTURE IDH FLAG
APUES	; ACTIVE PICTURE UES FLAG
D0 - D7	; CPU DATA
FFEDA	; FULL FIELD EDA FLAG
FFEDH	; FULL FIELD EDH FLAG
FFIDA	; FULL FIELD IDA FLAG
FFIDH	; FULL FIELD IDH FLAG
FFUES	; FULL FIELD UES FLAG





CXK1203AR (SONY)
CXK1203AR-T4

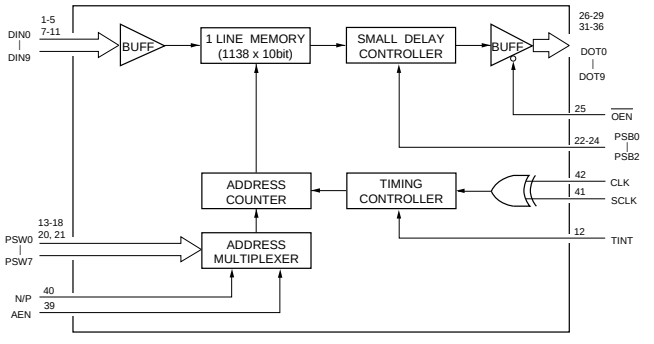
C-MOS DIGITAL LINE MEMORY
—TOP VIEW—



(VDD = +5V)

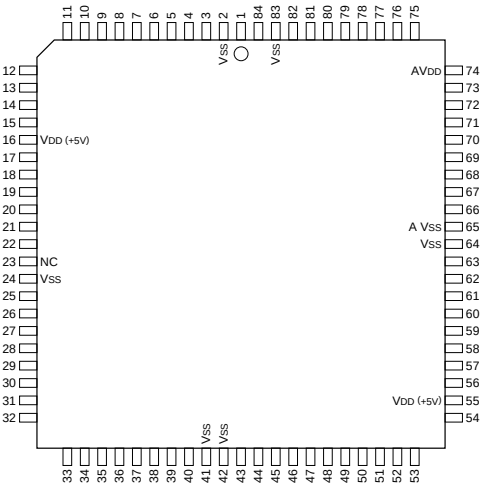
PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	D0	13	I	PSW7	25	I	$\overline{OEN}$	37	—	N.C
2	I	D1	14	I	PSW6	26	O	DOT9	38	—	N.C
3	I	D2	15	I	PSW5	27	O	DOT8	39	I	AEN
4	I	D3	16	I	PSW4	28	O	DOT7	40	I	N/P
5	I	D4	17	I	PSW3	29	O	DOT6	41	I	SCLK
6	—	GND	18	I	PSW2	30	—	GND	42	I	CLK
7	I	D5	19	—	VDD	31	O	DOT5	43	—	VDD
8	I	D6	20	I	PSW1	32	O	DOT4	44	—	N.C
9	I	D7	21	I	PSW0	33	O	DOT3	45	—	N.C
10	I	D8	22	I	PSB2	34	O	DOT2	46	—	N.C
11	I	D9	23	I	PSB1	35	O	DOT1	47	—	N.C
12	I	TINT	24	I	PSB0	36	O	DOT0	48	—	N.C

AEN	;	LINE MEMORY SELECT
CLK	;	CLOCK
DIN0-DIN9	;	VIDEO DATA INPUT
DOT0-DOT9	;	VIDEO DATA OUTPUT
N/P	;	NTSC/PAL/SECAM SELECT
OEN	;	OUTPUT ENABLE
PSB0-PSB2	;	DELAY STEP SELECT (1 BITxN)
PSW0-PSW7	;	DELAY STEP SELECT (8 BITxN)
SCLK	;	CLOCK EDGE SELECT
TINT	;	TEST



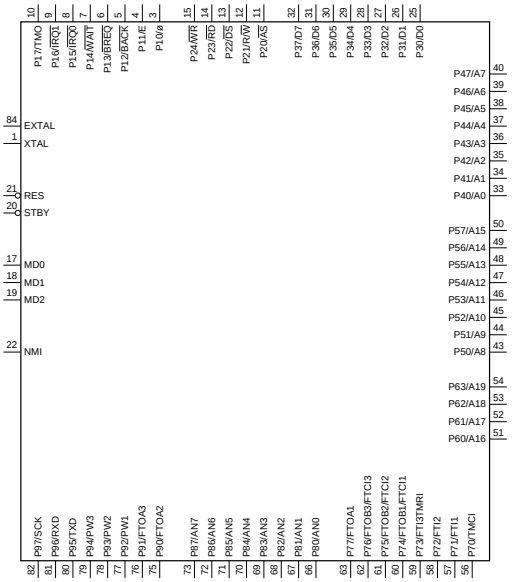
HD6475328CP10 (HITACHI)

16-BIT CPU
-TOP VIEW-



(VDD=+5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	XTAL	29	I/O	P34/D4	57	I/O	P71/FTI1
2	—	VSS	30	I/O	P35/D5	58	I/O	P72/FTI2
3	I/O	P10/ø	31	I/O	P36/D6	59	I/O	P73/FTI3/TMRI
4	I/O	P11/E	32	I/O	P37/D7	60	I/O	P74/FTOB1/FTCI1
5	I/O	P12/$\overline{BACK}$	33	I/O	P40/A0	61	I/O	P75/FTOB2/FTCI2
6	I/O	P13/$\overline{BREQ}$	34	I/O	P41/A1	62	I/O	P76/FTOB3/FTCI3
7	I/O	P14/$\overline{WAIT}$	35	I/O	P42/A2	63	O	P77/FTOA1
8	I/O	P15/$\overline{IRQ0}$	36	I/O	P43/A3	64	—	VSS
9	I/O	P16/$\overline{IRQ1}$	37	I/O	P44/A4	65	—	A VSS
10	I/O	P17/TMO	38	I/O	P45/A5	66	I/O	P80/AN0
11	I/O	P20/$\overline{AS}$	39	I/O	P46/A6	67	I/O	P81/AN1
12	I/O	P21/R/$\overline{W}$	40	I/O	P47/A7	68	I/O	P82/AN2
13	I/O	P22/$\overline{DS}$	41	—	VSS	69	I/O	P83/AN3
14	I/O	P23/$\overline{RD}$	42	—	VSS	70	I/O	P84/AN4
15	I/O	P24/$\overline{WR}$	43	I/O	P50/A8	71	I/O	P85/AN5
16	—	VDD	44	I/O	P51/A9	72	I/O	P86/AN6
17	I	MD0	45	I/O	P52/A10	73	I/O	P87/AN7
18	I	MD1	46	I/O	P53/A11	74	—	AVDD
19	I	MD2	47	I/O	P54/A12	75	I/O	P90/FTOA2
20	I	STBY	48	I/O	P55/A13	76	I/O	P91/FTOA3
21	I	RES	49	I/O	P56/A14	77	I/O	P92/PW1
22	I	NMI	50	I/O	P57/A15	78	I/O	P93/PW2
23	—	NC	51	I/O	P60/A16	79	I/O	P94/PW3
24	—	VSS	52	I/O	P61/A17	80	I/O	P95/TXD
25	I/O	P30/D0	53	I/O	P62/A18	81	I/O	P96/RXD
26	I/O	P31/D1	54	I/O	P63/A19	82	I/O	P97/SCK
27	I/O	P32/D2	55	—	VDD	83	—	VSS
28	I/O	P33/D3	56	I/O	P70/TMCI	84	I	EXTAL



INPUT

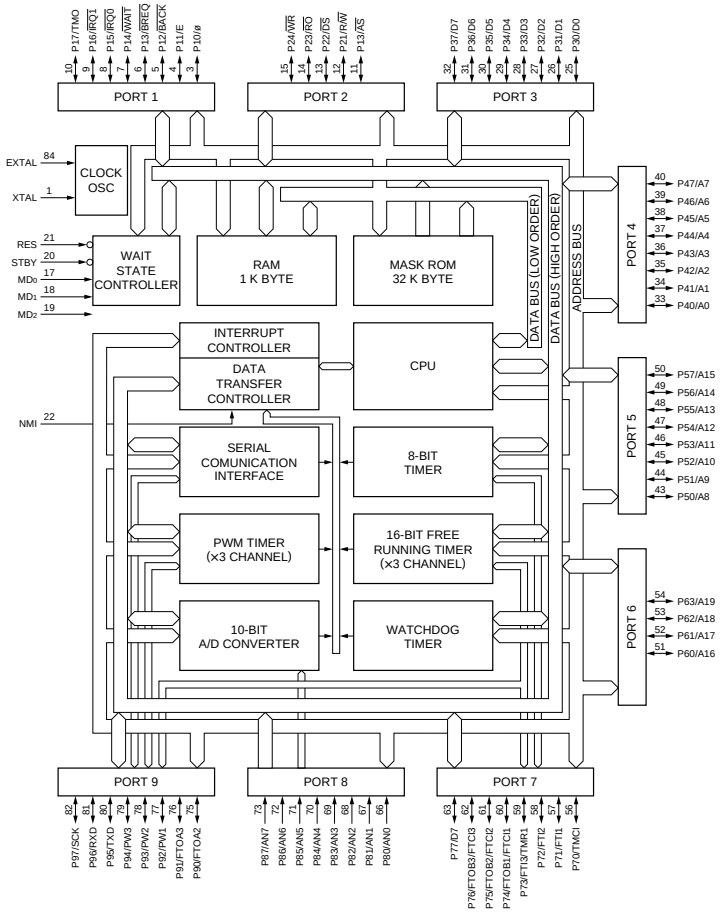
AN0-AN7	;	ANALOG INPUTS
BREQ	;	BUS REQUEST
EXRAL	;	CONNECTED TO CRYSTAL OSCILLATOR
FTCI1-FTCI3	;	FRT COUNTER CLOCK INPUTS (CHANNEL 1 TO 3)
FTI1-FTI3	;	FRT INPUT CAPTURE INPUTS (CHANNEL 1 TO 3)
IRQ0, 1	;	INTERRUPTION REQUEST 0 AND 1
MD0-MD2	;	MODE SETTING
NMI	;	NON MASKABLE INTERRUPTION
P80-P87	;	PORT 8
RES	;	RESET
RXD	;	RECEIVE DATA
STBY	;	STANDBY
TMCI	;	8-BIT TIMER CLOCK INPUT
TMRI	;	8-BIT TIMER COUNTER RESET INPUT
WAIT	;	WAIT
XRAL	;	CONNECTED TO CRYSTAL OSCILLATOR

OUTPUT

A0-A19	;	ADDRESS BUS
AS	;	ADDRESS STROBE
BACK	;	BUS REQUEST ACKNOWLEDGE
DS	;	DATA STROBE
E	;	ENABLE CLOCK
FTOA1-FTOA3	;	FRT OUTPUT COMPARE A OUTPUT (CHANNEL 1 TO 3)
FTOB1-FTOB3	;	FRT OUTPUT COMPARE B OUTPUT (CHANNEL 1 TO 3)
PW1-PW3	;	PWM TIMER OUTPUT (CHANNEL 1 TO 3)
R/W	;	READ/WRITE
RD	;	READ
TMO	;	8-BIT TIMER OUTPUT
TXD	;	SEND DATA
WR	;	WRITE
ø	;	SYSTEM CLOCK

INPUT/OUTPUT

D0-D7	;	DATA BUS
P10-P17	;	PORT 1
P20-P24	;	PORT 2
P30-P37	;	PORT 3
P40-P47	;	PORT 4
P50-P57	;	PORT 5
P60-P63	;	PORT 6
P70-P77	;	PORT 7
P90-P97	;	PORT 9
SCK	;	SERIAL CLOCK INPUT/OUTPUT

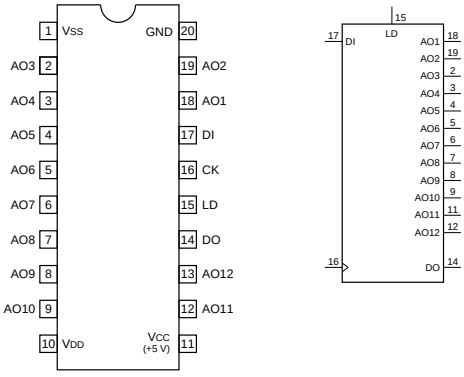


LM4040AIM3-2.5 (NS)
LM4040BIM3-5.0 (NS)
LM4040BIM3X-5.0

PRECISION MICROPOWER SHUNT VOLTAGE REFERENCE
— TOP VIEW —

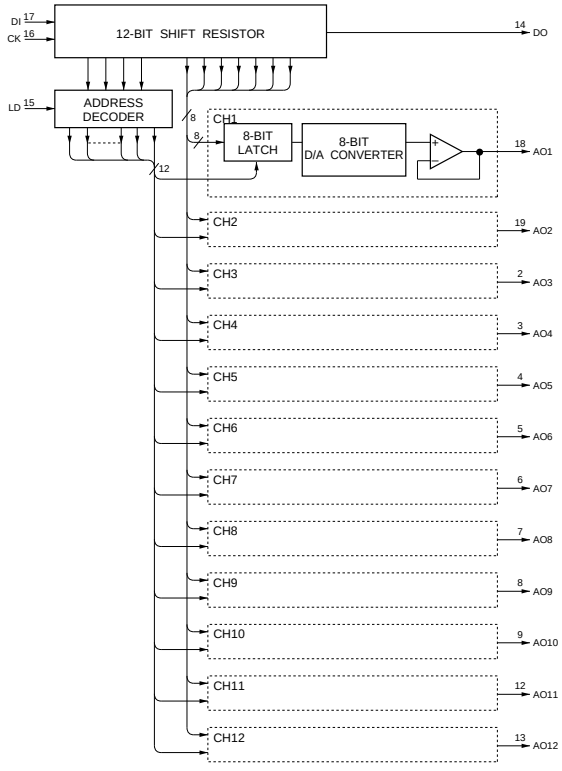
M62352GP-75ED (MITSUBISHI)FLAT PACKAGE

C-MOS 8-BITx12 CHANNEL D/A CONVERTER
(WITH BUFFER OPERATIONAL AMPLIFIER)
— TOP VIEW —



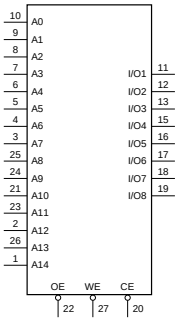
AO1-AO12	;	8-BIT D/A OUTPUTS
CK	;	CLOCK INPUT
DI	;	SERIAL DATA INPUT
DO	;	DATA OUTPUT

NOTE:
3.5 V < VDD < VCC
–3.5 V < VSS < VCC



CXK58257BTM-10LL (SONY)FLAT PACKAGE
CXK58257BTM-10LL-T6

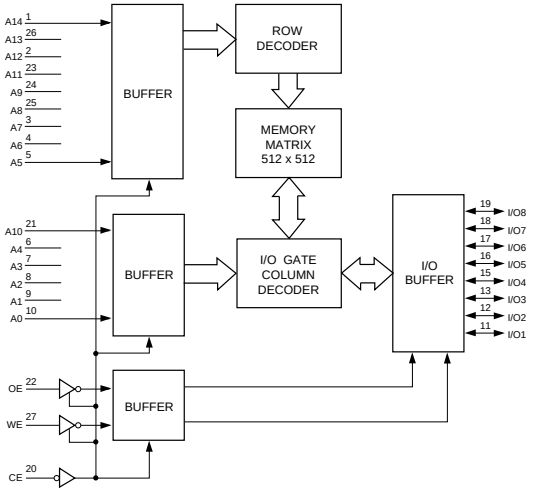
C-MOS 256K (32768 x 8)-BIT STATIC RAM
—TOP VIEW—



A0-A14 ; ADDRESS INPUTS
CE ; CHIP ENABLE INPUT
I/O1-I/O8 ; DATA INPUTS/OUTPUTS
OE ; OUTPUT ENABLE INPUT
WE ; WRITE ENABLE INPUT

CE	OE	WE	MODE	I/O TERMINAL
1	X	X	NOT SELECT	HIGH IMPEDANCE
0	1	1	OUTPUT DISABLE	HIGH IMPEDANCE
0	0	1	READ	OUTPUT DATA
0	X	0	WRITE	INPUT DATA

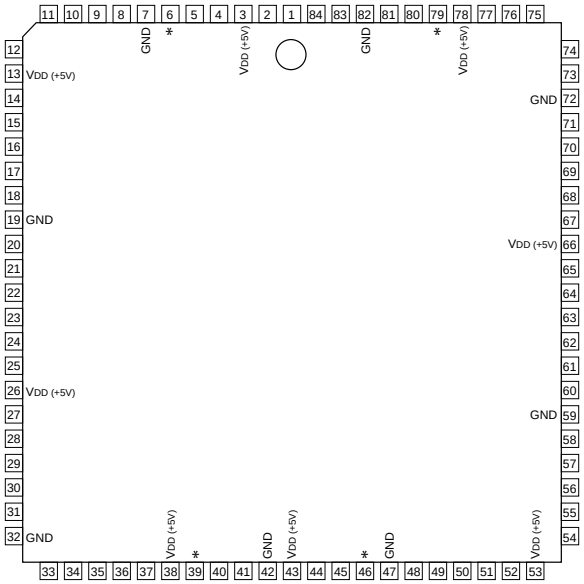
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE



EPM7128ELC84-15 (ALTERA)

C-MOS ELECTRICAL ERASABLE PLD

—TOP VIEW—



(VDD = +5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	GCLR	22	I/O	LAB B	43	—	VDD	64	I/O	LAB G
2	I	OE2	23	I/O	LAB C	44	I/O	LAB E	65	I/O	LAB G
3	—	VDD	24	I/O	LAB C	45	I/O	LAB E	66	—	VDD
4	I/O	LAB A	25	I/O	LAB C	46	I/O	LAB E*	67	I/O	LAB G
5	I/O	LAB A	26	—	VDD	47	—	GND	68	I/O	LAB G
6	I/O	LAB A*	27	I/O	LAB C	48	I/O	LAB E	69	I/O	LAB G
7	—	GND	28	I/O	LAB C	49	I/O	LAB E	70	I/O	LAB G
8	I/O	LAB A	29	I/O	LAB C	50	I/O	LAB E	71	I/O	LAB G
9	I/O	LAB A	30	I/O	LAB C	51	I/O	LAB E	72	—	GND
10	I/O	LAB A	31	I/O	LAB C	52	I/O	LAB E	73	I/O	LAB H
11	I/O	LAB A	32	—	GND	53	—	VDD	74	I/O	LAB H
12	I/O	LAB A	33	I/O	LAB D	54	I/O	LAB F	75	I/O	LAB H
13	—	VDD	34	I/O	LAB D	55	I/O	LAB F	76	I/O	LAB H
14	I/O	LAB B	35	I/O	LAB D	56	I/O	LAB F	77	I/O	LAB H
15	I/O	LAB B	36	I/O	LAB D	57	I/O	LAB F	78	—	VDD
16	I/O	LAB B	37	I/O	LAB D	58	I/O	LAB F	79	I/O	LAB H*
17	I/O	LAB B	38	—	VDD	59	—	GND	80	I/O	LAB H
18	I/O	LAB B	39	I/O	LAB D*	60	I/O	LAB F	81	I/O	LAB H
19	—	GND	40	I/O	LAB D	61	I/O	LAB F	82	—	GND
20	I/O	LAB B	41	I/O	LAB D	62	I/O	LAB F	83	I	GCLK
21	I/O	LAB B	42	—	GND	63	I/O	LAB G	84	I	OE1

INPUT

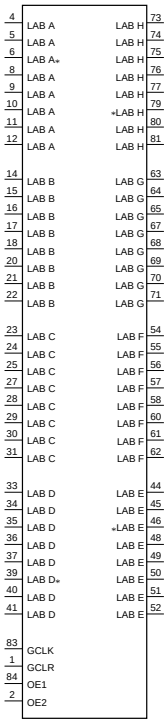
GCLK ; GROBAL CLOCK
GCLR ; GROBAL CLEAR
OE1, 2 ; OUTPUT ENABLE 1, 2

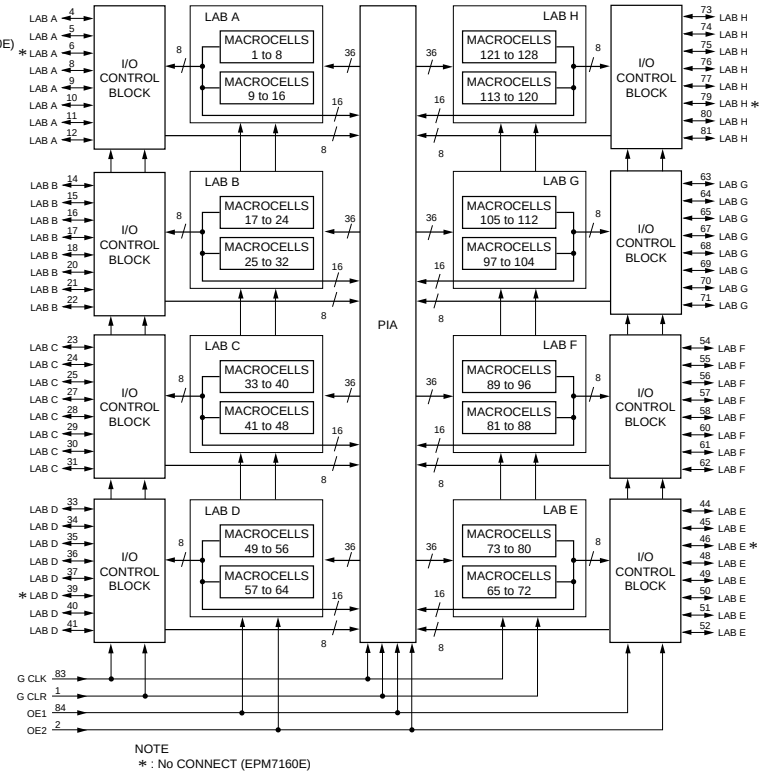
INPUT/OUTPUT

LAB A ; LOGIC ARRAY BLOCK A
LAB B ; LOGIC ARRAY BLOCK B
LAB C ; LOGIC ARRAY BLOCK C
LAB D ; LOGIC ARRAY BLOCK D
LAB E ; LOGIC ARRAY BLOCK E
LAB F ; LOGIC ARRAY BLOCK F
LAB G ; LOGIC ARRAY BLOCK G
LAB H ; LOGIC ARRAY BLOCK H

NOTE

* ; No CONNECT (EPM7160E)



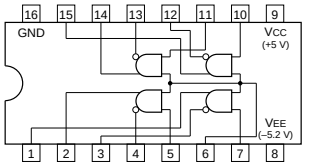


NOTE

* : No CONNECT (EPM7160E)

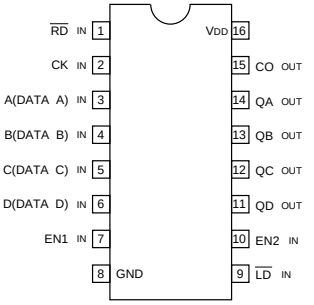
MC10H124M (MOTOROLA)FLAT PACKAGE

ECL TTL-TO-ECL TRANSLATOR
-TOP VIEW-



MC74HC163AF (MOTOROLA)FLAT PACKAGE
TC74VHC163F (TOSHIBA)FLAT PACKAGE
TC74VHC163F(EL)

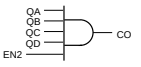
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
—TOP VIEW—



MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

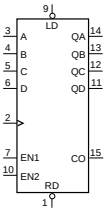
CARRY OUTPUT "CO"



CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

NOTE:

TYPE	VDD
HC	+2 to +6V
AC/VHC	+2 to +5.5V
HCT/ACT/FCT	+5V

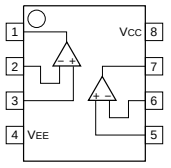


COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

NJM062V(TE2) (JRC)FLAT PACKAGE(SMALL)
TL062CPS (TI)FLAT PACKAGE
TL062CPS-E05

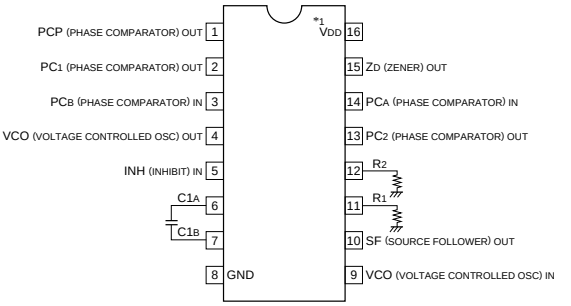
DUAL OPERATIONAL AMPLIFIERS
(DUAL-SUPPLY TYPE)
–TOP VIEW–

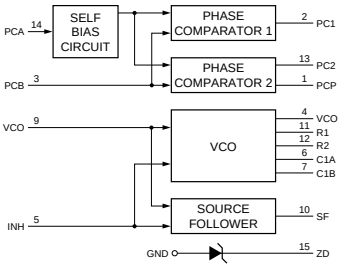


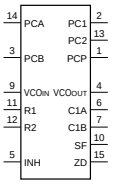
TYPE	VCC	VEE
062/072/082/4556A/ M5218/BA15218/ 33178/34182 TYPES	+2 to +16V	–2 to –16V
4580 TYPE	+2 to +18V	–2 to –18V
5532 TYPE	+3 to +20V	–3 to –20V
CXA1297 TYPE	+5 to +12V	–5 to –12V
M5219/M5220 TYPES	+5 to +22.5V	–5 to –22.5V
NJM2100 TYPE	+1 to +3.5V	–1 to –3.5V
OP-297 TYPE	+2 to +20V	–2 to –20V
OTHERS	+5 to +16V	–5 to –16V

MC74HC4046AF (MOTOROLA)FLAT PACKAGE
MC74HC4046AFEL

C-MOS PHASE LOCKED LOOP
-TOP VIEW-





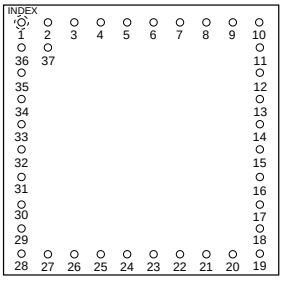


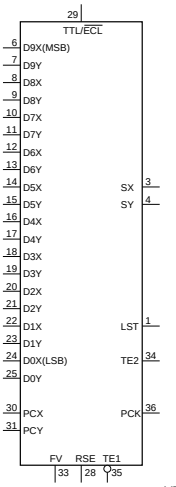
*1

TYPE	VDD
CD4046BE HD14046BP MC14046BCP MC14046BF TC4046BP	+3 to +8V
CD74HC4046AM MC74HC4046AF MC74HC4046AN	+2 to +6V

SBX1601A (SONY)

8- OR 10-BIT PARALLEL-TO-SERIAL CONVERTER
-BOTTOM VIEW-





INPUT

D9X – D0X, D9Y – D0Y; PARALLEL DATA INPUTS
PCX, PCY ; PARALLEL CLOCK INPUTS
FV ; VCO FREQ. ADJ. INPUT
RSE ; VCO RANGE SELECT INPUT (H : HIGH RANGE)
TE1 ; TEST TERMINAL (LOW = TEST)
TTL/ECL ; VCC FOR INPUT LEVEL SELECT (+5 V = TTL, GND = ECL)

OUTPUT

LST ; PLL LOCK DETECT OUTPUT (H : LOCK)
PCK ; PARALLEL CLOCK OUTPUT
SX, SY ; SERIAL DATA OUTPUTS
TE2 ; TEST TERMINAL

VEE1 = –5 V
VEE2 = –3.5 V

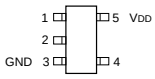
PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	LST	11	I	D7Y	21	I	D2Y	31	I	PCY
2	–	GND	12	I	D6X	22	I	D1X	32	–	GND
3	O	SX	13	I	D6Y	23	I	D1Y	33	I	FV
4	O	SY	14	I	D5X	24	I	D0X(LSB)	34	O	TE2
5	–	GND	15	I	D5Y	25	I	D0Y	35	I	TE1
6	I	D9X(MSB)	16	I	D4X	26	–	VEE1	36	O	PCK
7	I	D9Y	17	I	D4Y	27	–	VEE2	37	–	NC
8	I	D8X	18	I	D3X	28	I	RSE			
9	I	D8Y	19	I	D3Y	29	–	TTL/ECL			
10	I	D7X	20	I	D2X	30	I	PCX			

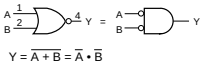
http://getMANUAL.com

SC7S02F (MOTOROLA)CHIP PACKAGE
TC7S02F(TE85R)

C-MOS 2-INPUT NOR GATE

—TOP VIEW—





$Y = \overline{A + B} = \overline{A} \cdot \overline{B}$

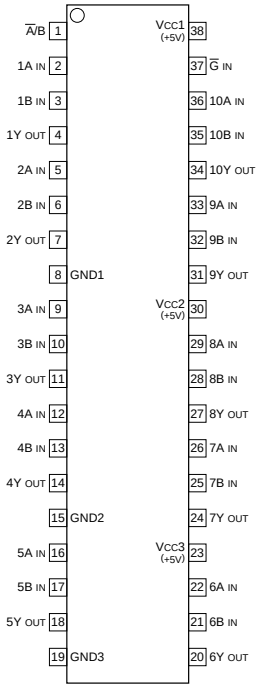
A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

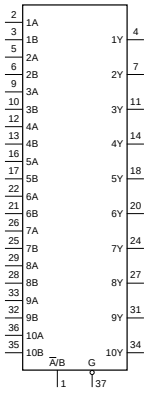
0 ; LOW LEVEL
1 ; HIGH LEVEL

TYPE	VDD
4S01F	+3 to +18V
7S02F	+2 to +6V
7S02FU	
7SH02FU	

SN74ALS38157ADB (TI)FLAT PACKAGE
SN74ALS38157ADB-E05

10-BIT 1 OF 2 DATA SELECTORS/MULTIPLEXERS
-TOP VIEW-



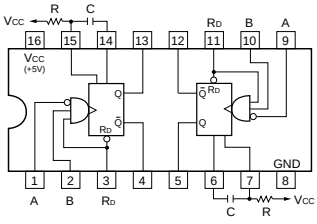


INPUTS				OUT
G	A/B	A	B	Y
1	X	X	X	0
0	0	0	X	0
0	0	1	X	1
0	1	X	0	0
0	1	X	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

SN74LS123NS-E05 (TI)FLAT PACKAGE

TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATORS WITH DIRECT RESET
—TOP VIEW—



INPUTS			OUTPUTS	
RD	A	B	Q	$\overline{Q}$
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⊓	⊔
1	↓	1	⊓	⊔
↑	0	1	⊓	⊔

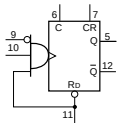
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

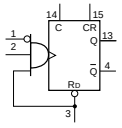
OUTPUT PULSE WIDTH

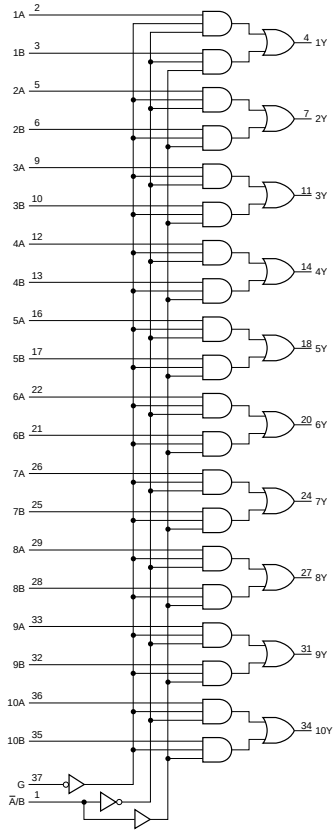
'123 ;T_W=0.28 $(1+\frac{700}{R})$ CR
'L123;T_W=0.33 $(1+\frac{700}{R})$ CR

'123 ;T_W=0.25 $(1+\frac{700}{R})$ CR
'L123;T_W=0.29 $(1+\frac{700}{R})$ CR

'LS123;T_W=0.45CR

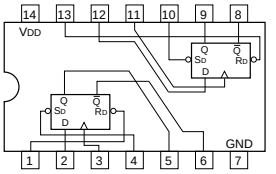






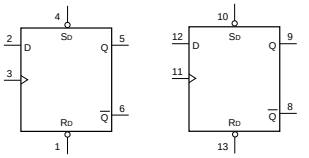
SN74LVC74NS-E05 (TI)FLAT PACKAGE
TC74VHC74F(EL) (TOSHIBA)
TC74VHCT74F(EL) (TOSHIBA)FLAT PACKAGE

C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET
-TOP VIEW-



INPUTS				OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	CK	D	Qn+1	$\overline{Q_{n+1}}$
0	1	×	×	1	0
1	0	×	×	0	1
0	0	×	×	1	1
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	×	Qn	$\overline{Q_n}$

0 ; LOW LEVEL
1 ; HIGH LEVEL
× ; DON'T CARE

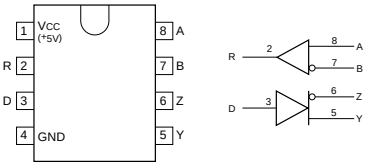


NOTE:

TYPE	VDD
74HCT/74ACT	+4.5 to +5.5V
74LVC	+2.7 to +3.6V
74AC/74VHC	+2 to +5.5V
OTHERS	+2 to +6V

SN75179BPS (TI)FLAT PACKAGE
SN75179BPS-E05

DIFFERENTIAL BUS DRIVER/RECEIVER
-TOP VIEW-



-DRIVER-

INPUT	OUTPUTS	
D	Y	Z
H	H	L
L	L	H

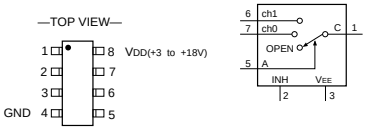
-RECEIVER-

DIFFERENTIAL INPUTS A–B	OUTPUTS R
$V_{ID} \geq 0.2V$	H
$-0.2V < V_{ID} < 0.2V$	?
$V_{ID} \leq -0.2V$	L

H = HIGH LEVEL L = LOW LEVEL ? = INDETERMINATE

TC4W53F(TE12R) (TOSHIBA)CHIP PACKAGE(5.0 X 3.1)
TC4W53FU(TE12R) (TOSHIBA)CHIP PACKAGE

C-MOS 2-CHANNEL MULTIPLEXER / DEMULTIPLEXER

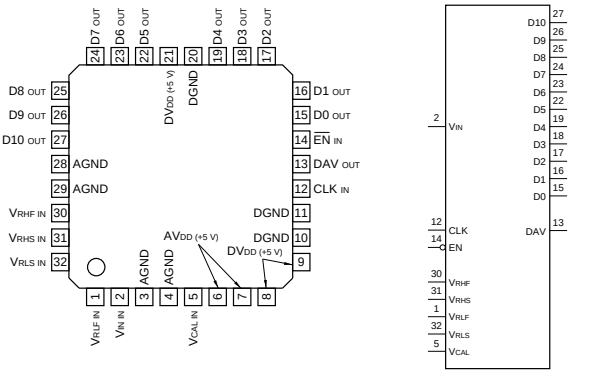


CONT.INPUT		ON CHANNEL
INH	A	
0	0	ch0
0	1	ch1
1	X	OPEN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

SPT7860SCT (SIGNAL PROCESSING TECHNOLOGIES)

C-MOS 10-BIT A/D CONVERTER
– TOP VIEW –



INPUT

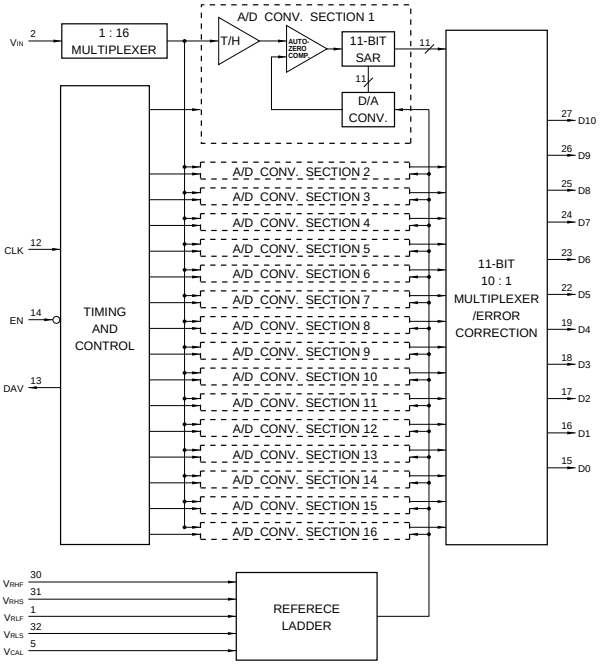
CLK	; CLOCK $f_{CLK} = f_S$
$\overline{EN}$	; OUTPUT ENABLE
V_{CAL}	; CALIBRATION REFERENCE
V_{IN}	; ANALOG VOLTAGE
V_{RHF}	; REFERENCE HIGH FORCE
V_{RHS}	; REFERENCE HIGH SENCE
V_{RLF}	; REFERENCE LOW FORCE
V_{RLS}	; REFERENCE LOW SENCE

OUTPUT

D0 - D9	; DIGITAL DATA
D10	; OVERRANGE
DAV	; DATA VALID

OTHER

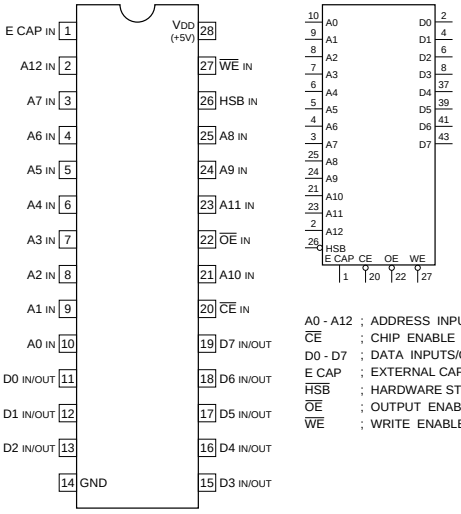
AGND	; ANALOG GROUND
AV_{DD}	; ANALOG POWER SUPPLY
DGND	; DIGITAL GROUND
DV_{DD}	; DIGITAL POWER SUPPLY



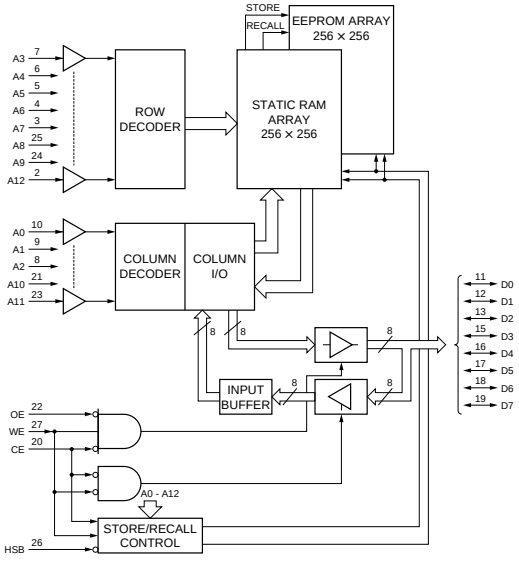
STK12C68-S45 (SIMTEK)FLAT PACKAGE

C-MOS 8K × 8-BIT NONVOLATILE STATIC RAM

– TOP VIEW–



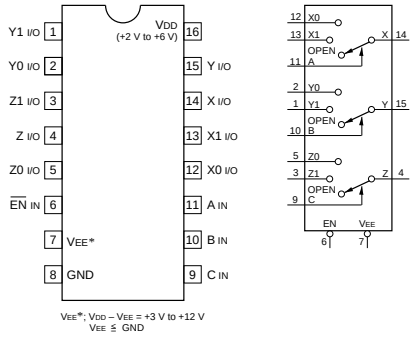
A0 - A12 ; ADDRESS INPUTS
$\overline{CE}$; CHIP ENABLE INPUT
D0 - D7 ; DATA INPUTS/OUTPUTS
E CAP ; EXTERNAL CAPACITOR
$\overline{HSB}$; HARDWARE STORE/BUSY
$\overline{OE}$; OUTPUT ENABLE INPUT
$\overline{WE}$; WRITE ENABLE INPUT



TC74HC4053AFS (TOSHIBA)FLAT PACKAGE
TC74HC4053AFS-EL

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER

-TOP VIEW-



VEE*; VDD – VEE = +3 V to +12 V
VEE ≦ GND

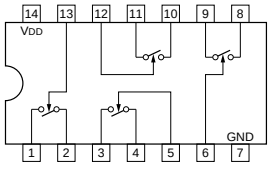
CONTROL INPUTS				ON CHANNEL		
EN	SELECT					
	C	B	A			
0	0	0	0	Z0	Y0	X0
0	0	0	1	Z0	Y0	X1
0	0	1	0	Z0	Y1	X0
0	0	1	1	Z0	Y1	X1
0	1	0	0	Z1	Y0	X0
0	1	0	1	Z1	Y0	X1
0	1	1	0	Z1	Y1	X0
0	1	1	1	Z1	Y1	X1
1	×	×	×	OPEN		

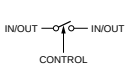
0 ; LOW LEVEL
1 ; HIGH LEVEL
×; DON'T CARE

TC74HC4066AFS-EL (TOSHIBA)FLAT PACKAGE

C-MOS BILATERAL ANALOG SWITCH

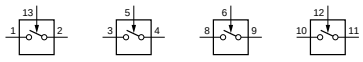
-TOP VIEW-





CONTROL	SWITCH
0	OFF
1	ON

0 ; LOW LEVEL
1 ; HIGH LEVEL



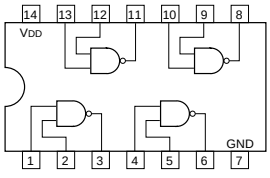
NOTE :

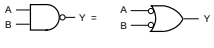
TYPE	VDD
MC74HC4066N	+3 to +12V
TC74HC4066AFS	+2 to +12V
OTHER TYPES	+2 to +6V

TC74VHC00F (TOSHIBA)FLAT PACKAGE
TC74VHC00F(EL)
TC74VHCT00F(EL) (TOSHIBA)FLAT PACKAGE

C-MOS QUAD 2-INPUT NAND GATES

-TOP VIEW-





$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

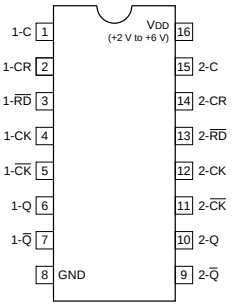
NOTE:

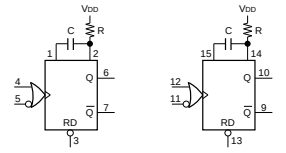
TYPE	VDD
74AC/74VHC	+2 to +5.5V
74ACT/74HCT/74VHCT	+4.5 to +5.5V
LCX	+2 to +3.6V
OTHER TYPES	+2 to +6V

TC74HC4538AF (TOSHIBA)FLAT PACKAGE

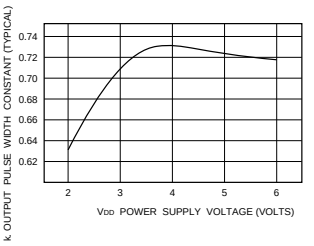
C-MOS DUAL RETRIGGERABLE / NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR

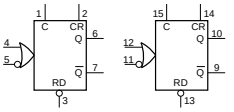
-TOP VIEW -



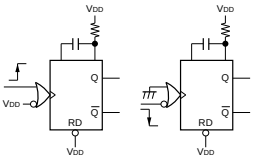


OUTPUT PULSE WIDTH = k · C · R

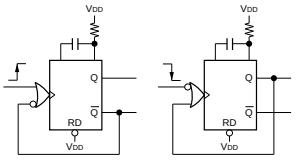




RETRIGGERABLE M. M. V



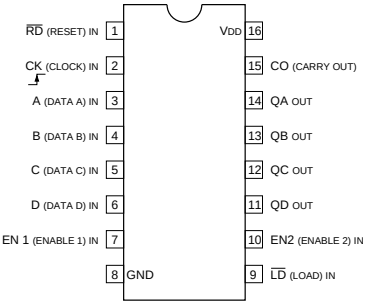
NON-RETRIGGERABLE M. M. V

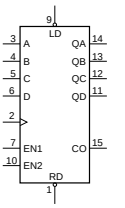


TC74VHC161F(EL) (TOSHIBA)

C-MOS SYNCHRONOUS PRESETTABLE 4-BIT BINARY COUNTER

-TOP VIEW-





MODE SELECTION

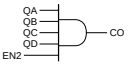
CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (ASYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

CARRY OUTPUT "CO"



CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

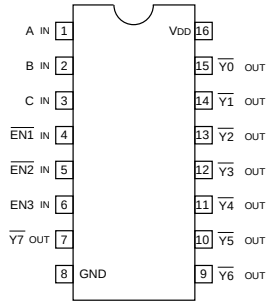
NOTE :

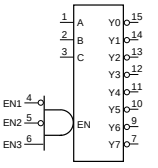
TYPE	VDD
74ACT	+5 V
TC40H	+2 to +8 V
OTHERS	+2 to +6 V

TC74VHC138FS(EL) (TOSHIBA)FLAT PACKAGE(SMALL)

C-MOS 3-TO-8 LINE DECODER / DEMULTIPLEXER

—TOP VIEW—





INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

$EN = \overline{EN1} \cdot \overline{EN2} \cdot EN3$

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

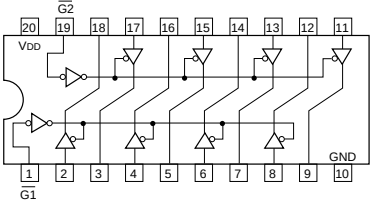
NOTE:

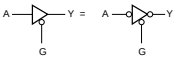
TYPE	VDD
74HCT138 TYPE	+5V
74ACT138 TYPE	+4.5 to +5.5V
TC74AC138 TYPE TC74VHC138	+2 to +5.5V
OTHER TYPES	+2 to +6V

TC74VHC244FS(EL) (TOSHIBA)FLAT PACKAGE(SMALL)

C-MOS BUS BUFFER WITH 3-STATE OUTPUTS

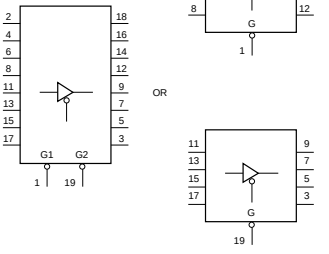
-TOP VIEW-





G	A	Y
0	0	0
0	1	1
X	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

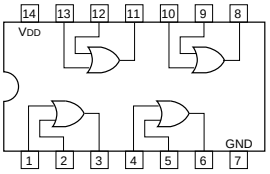


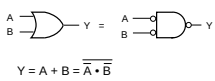
NOTE:

TYPE	VDD
74HC 40H	+2 to +6V
74ACT 74BCT 74FCT 74HCT	+4.5 to +5.5V
74LCX	+2 to +3.6V
74AC/74VHC	+2 to +5.5V

TC74VHC32F(EL) (TOSHIBA)

C-MOS QUAD 2-INPUT OR GATES
-TOP VIEW-





$Y = A + B = \overline{\overline{A} \cdot \overline{B}}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

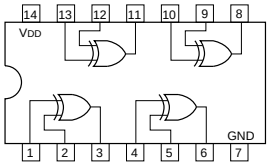
0 ; LOW LEVEL
1 ; HIGH LEVEL

NOTE:

TYPE	VDD
74AC/74VHC	+2 to +5.5V
74HC	+2 to +6V
74HCT	+4.5 to +5.5V

TC74VHC86F (TOSHIBA)FLAT PACKAGE

C-MOS QUAD EXCLUSIVE OR GATES
-TOP VIEW-



$Y = \overline{A} \cdot B + A \cdot \overline{B}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

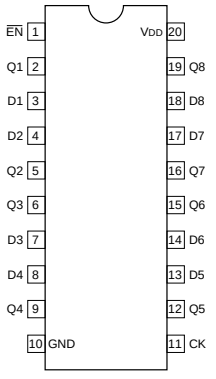
0 ; LOW LEVEL
1 ; HIGH LEVEL

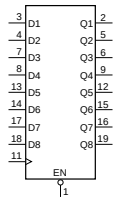
NOTE :

TYPE	VDD
74AC/74VHC	+2V to +5.5V
74ACT/74HCT	+4.5 to +5.5V
OTHER TYPES	+2V to +6V

TC74VHCT374F(EL) (TOSHIBA)FLAT PACKAGE

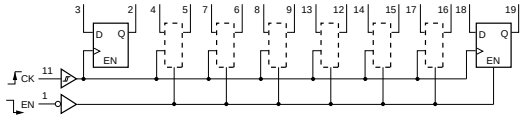
C-MOS 3-STATE OCTAL D-TYPE FLIP-FLOP
-TOP VIEW-





INPUTS			OUT
EN	D	CK	0
0	1	↑	1
0	0	↑	0
0	×	0	Q_0
1	×	×	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
× ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

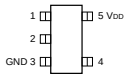


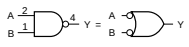
NOTE :

TYPE	VDD
74AC/74HC	+2 to +6V
74ACT/74BCT/74FCT /74HCT	+5V
74VHC	+2 to +5.5V

TC7S00F (TOSHIBA)CHIP PACKAGE

C-MOS 2-INPUT NAND GATE
— TOP VIEW —





$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

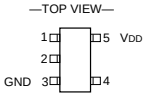
0 ; LOW LEVEL
1 ; HIGH LEVEL

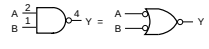
TYPE	VDD
7S00F 7S00FU	+2 to +6 V
4S11F 4SU11F	+3 to +18 V
7SH00FU	+2 to +5.5 V

TC7S08F (TOSHIBA)CHIP PACKAGE
TC7S08F(TE85R)

TC7S08F
IL00

C-MOS 2-INPUT AND GATE





$Y = A \cdot B = \overline{\overline{A} + \overline{B}}$

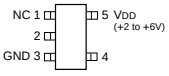
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

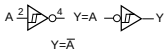
0 ; LOW LEVEL
1 ; HIGH LEVEL

TYPE	VDD
7S08F 7S08FU	+2 to +6V
4S81F 14S81F	+3 to +18V
7SH08FU	–2 to +5.5V

TC7S14F(TE85R)
TC7S14F-TE85L (TOSHIBA)CHIP PACKAGE

C-MOS SCHMITT INVERTER
-TOP VIEW-





$Y = \overline{A}$

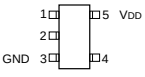
A	Y
0	1
1	0

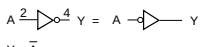
0 ; LOW LEVEL
1 ; HIGH LEVEL

TC7SH04FU (TOSHIBA)CHIP PACKAGE
TC7SH04FU-TE85R

C-MOS INVERTER

-TOP VIEW-





$Y = \overline{A}$

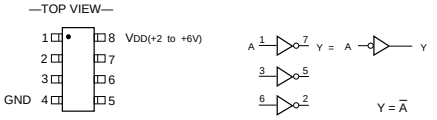
A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TYPE	VDD
7S04F 7SU04F 7SU04FU	+2 to +6V
4S69F 4SU69F	+3 to +18V
7SH04FU 7SHU04FU	+2 to +5.5V

TC7W04FU(TE12R) (TOSHIBA)FLAT PACKAGE

C-MOS HEX INVERTERS

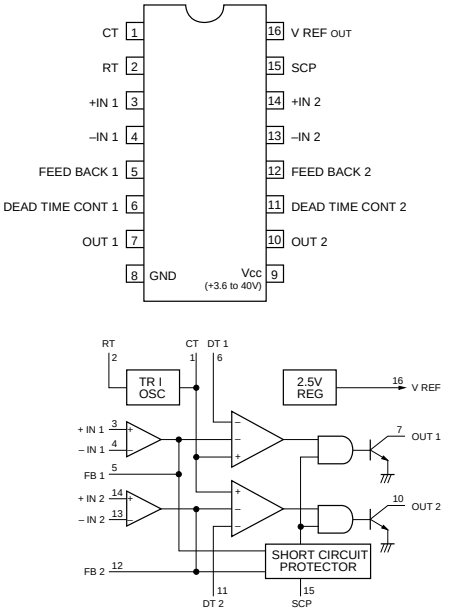


A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

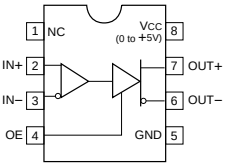
TL1451ACNS (TI)FLAT PACKAGE
TL1451ACNS-E05

DUAL PWM POWER CONTROLLER
-TOP VIEW-



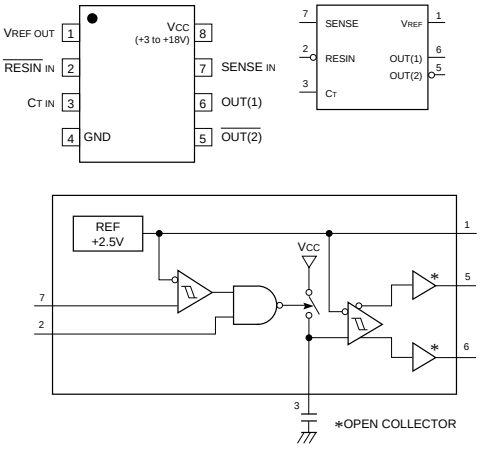
TL712CPS (TI)FLAT PACKAGE

HIGH SPEED COMPARATOR (TTL OUTPUT)
-TOP VIEW-



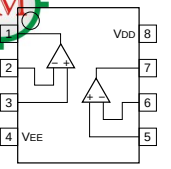
TL7705CPS-B (TI)FLAT PACKAGE
TL7705CPS-B-E05

POWER VOLTAGE SUPERVISOR
—TOP VIEW—



TLC272CPS (TI)FLAT PACKAGE
TLC272CPS-E05
TLC272CPW-E05 (TI)FLAT PACKAGE

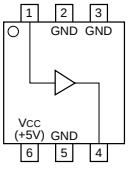
C-MOS DUAL OPERATIONAL AMPLIFIERS
(SINGLE-SUPPLY TYPE)
–TOP VIEW–



TYPE	VDD - VEE
LMC662 TYPE	+5 to +15V
OTHERS	+3 to +16V

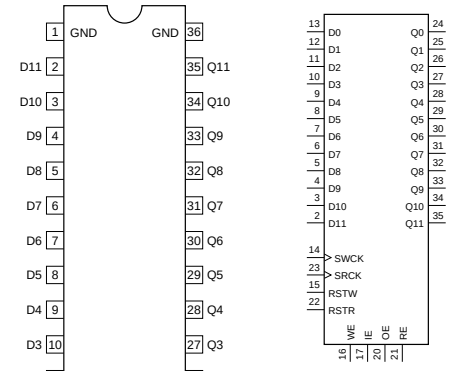
UPC2712T-E3 (NEC)FLAT PACKAGE

RF AMPLIFIER
-TOP VIEW-



TMS4C2973-26DTR (TI)FLAT PACKAGE

C-MOS 2.9M (245,760-WORD×12) BITS FIELD MEMORY
-TOP VIEW-

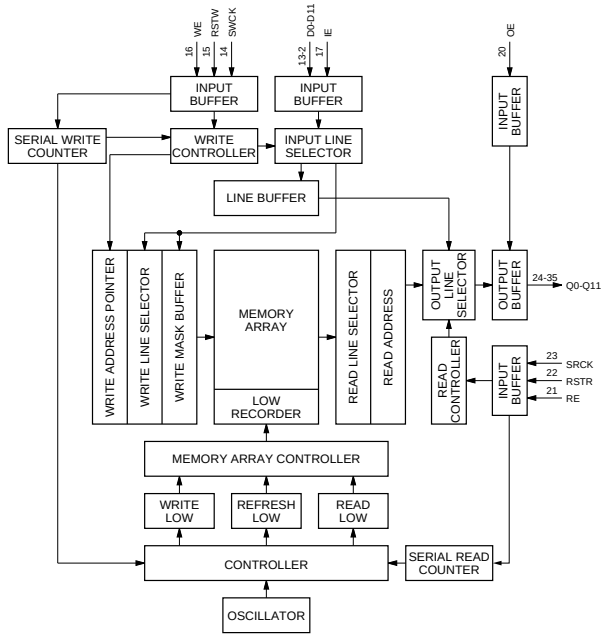


INPUT
D0 - D11 ; DATA INPUTS
IE ; INPUT ENABLE
OE ; OUTPUT ENABLE
RE ; READ ENABLE
RSTR ; RESET READ
RSTW ; RESET WRITE
SRCK ; SERIAL READ CLOCK
SWCK ; SERIAL WRITE CLOCK
WE ; WRITE ENABLE

OUTPUT
Q0 - Q11 ; DATA OUTPUTS

NOTE :

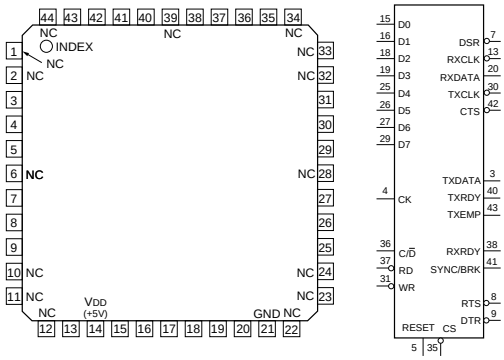
TYPE	VDD
TMS4C2970 TMS4C2972	+5V
TMS4C2973	+3.3V



NOTE :
TMS4C2972 AND TMS4C2973 ALLOW BLOCK RANDOM ACCESS.

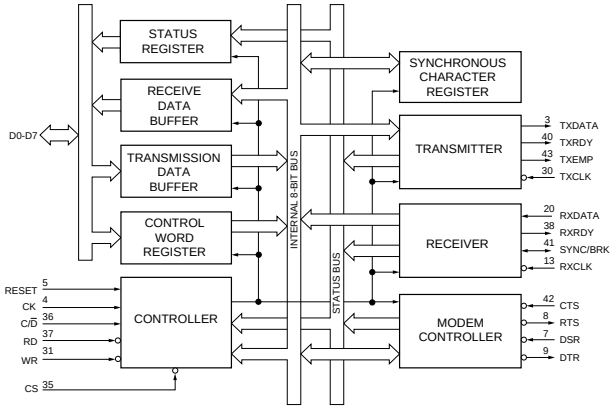
UPD71051GB-10-3B4 (NEC)FLAT PACKAGE

C-MOS SERIAL CONTROLLER
-TOP VIEW-



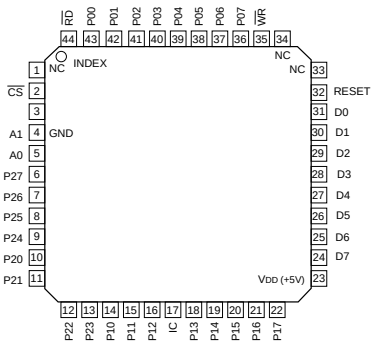
PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL
1	—	NC	12	—	NC	23	—	NC	34	—	NC
2	—	NC	13	I	$\overline{RXCLK}$	24	—	NC	35	I	$\overline{CS}$
3	O	TXDATA	14	—	VDD(+5V)	25	I/O	D4	36	I	C/$\overline{D}$
4	I	CK	15	I/O	D0	26	I/O	D5	37	I	$\overline{RD}$
5	I	RESET	16	I/O	D1	27	I/O	D6	38	O	RXRDY
6	—	NC	17	—	IC	28	—	NC	39	—	NC
7	I	DSR	18	I/O	D2	29	I/O	D7	40	O	TXRDY
8	O	$\overline{RTS}$	19	I/O	D3	30	I	$\overline{TXCLK}$	41	I/O	SYNC/BRK
9	O	$\overline{DTR}$	20	I	RXDATA	31	I	$\overline{WR}$	42	I	$\overline{CTS}$
10	—	NC	21	—	GND	32	—	NC	43	O	TXEMP
11	—	NC	22	—	NC	33	—	NC	44	—	NC

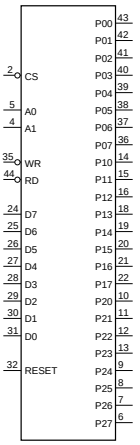
CK ; CLOCK INPUT
CS ; CHIP SELECT INPUT
CTS ; CLEAR TO SEND OUTPUT
C/$\overline{D}$; CONTROL/DATA SELECT INPUT
D0-D7 ; DATA INPUTS/OUTPUTS
DSR ; DATA SET READY INPUT
DTR ; DATA TERMINAL READY OUTPUT
TXCLK ; TRANSMITTER CLOCK INPUT
TXDATA ; TRANSMIT DATA OUTPUT
TXEMP ; TRANSMITTER EMPTY OUTPUT
TXRDY ; TRANSMIT READY OUTPUT
RD ; READ STROBE INPUT
RESET ; RESET INPUT
RTS ; REQUEST TO SEND OUTPUT
RXCLK ; RECEIVER CLOCK INPUT
RXDATA ; RECEIVE DATA INPUT
RXRDY ; RECEIVER READY OUTPUT
SYNC/BRK ; SYNCHRONIZATION/BREAK INPUT/OUTPUT
WR ; WRITE STROBE INPUT



UPD71055GB-10-3B4 (NEC)FLAT PACKAGE

C-MOS PARALLEL INTERFACE UNIT
—TOP VIEW—



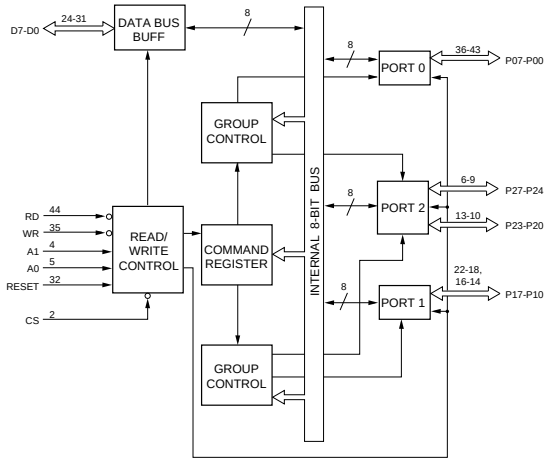


A1, A0 ; ADDRESS
CS ; CHIP SELECT
D7-D0 ; DATA BUS
P07-P00 ; PORT 0
P17-P10 ; PORT 1
P27-P20 ; PORT 2
RD ; READ STROBE
WR ; WRITE STROBE

IC ; INTERNALLY CONNECTED

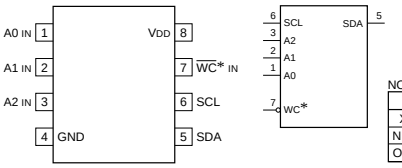
CS	RD	WR	A1	A0	OPERATION	CPU ACTION
0	0	1	0	0	PORT0→DATA • BUS	INPUT
0	0	1	0	1	PORT1→DATA • BUS	INPUT
0	0	1	1	0	PORT2→DATA • BUS	INPUT
0	0	1	1	1	DISABLE	
0	0	0	X	X		
0	1	0	0	0	DATA • BUS→PORT0	OUTPUT
0	1	0	0	1	DATA • BUS→PORT1	OUTPUT
0	1	0	1	0	DATA • BUS→PORT2	OUTPUT
0	1	0	1	1	DATA • BUS→COMMAND REGISTER	OUTPUT
0	1	1	X	X	HIGH IMPEDANCE	
1	X	X	X	X		

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE



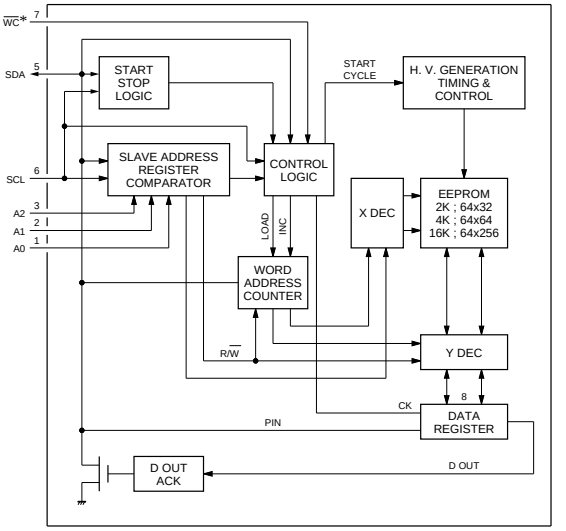
X24164SIC7000 (XICOR)(16K BIT)FLAT PACKAGE

C-MOS SERIAL EEPROM
-TOP VIEW-



NOTE :

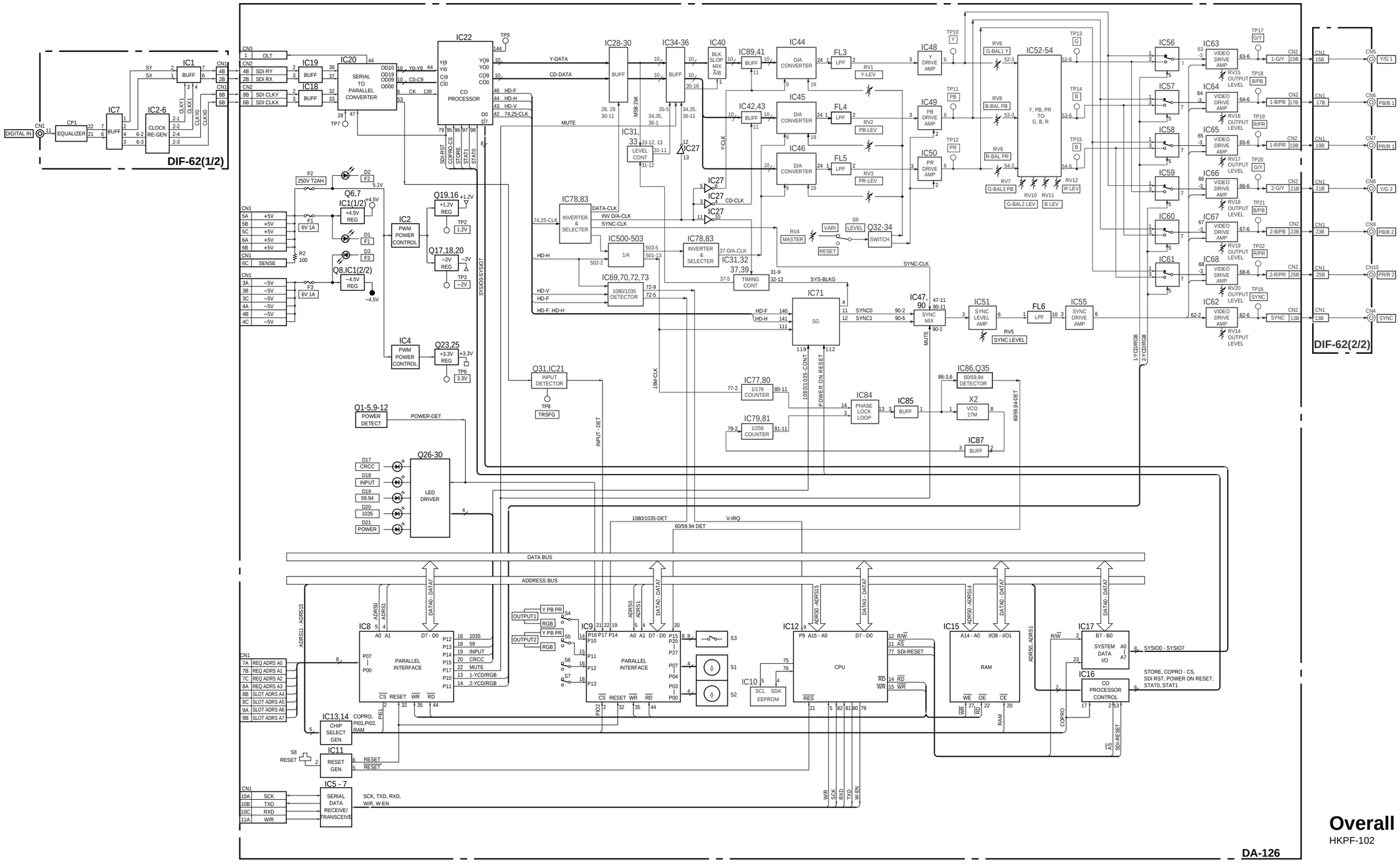
TYPE	VDD
X24C02S-3.0	+2.7 to +5.5V
NM24C16LEM8	+2.5 to +5.5V
OTHER TYPES	+5V



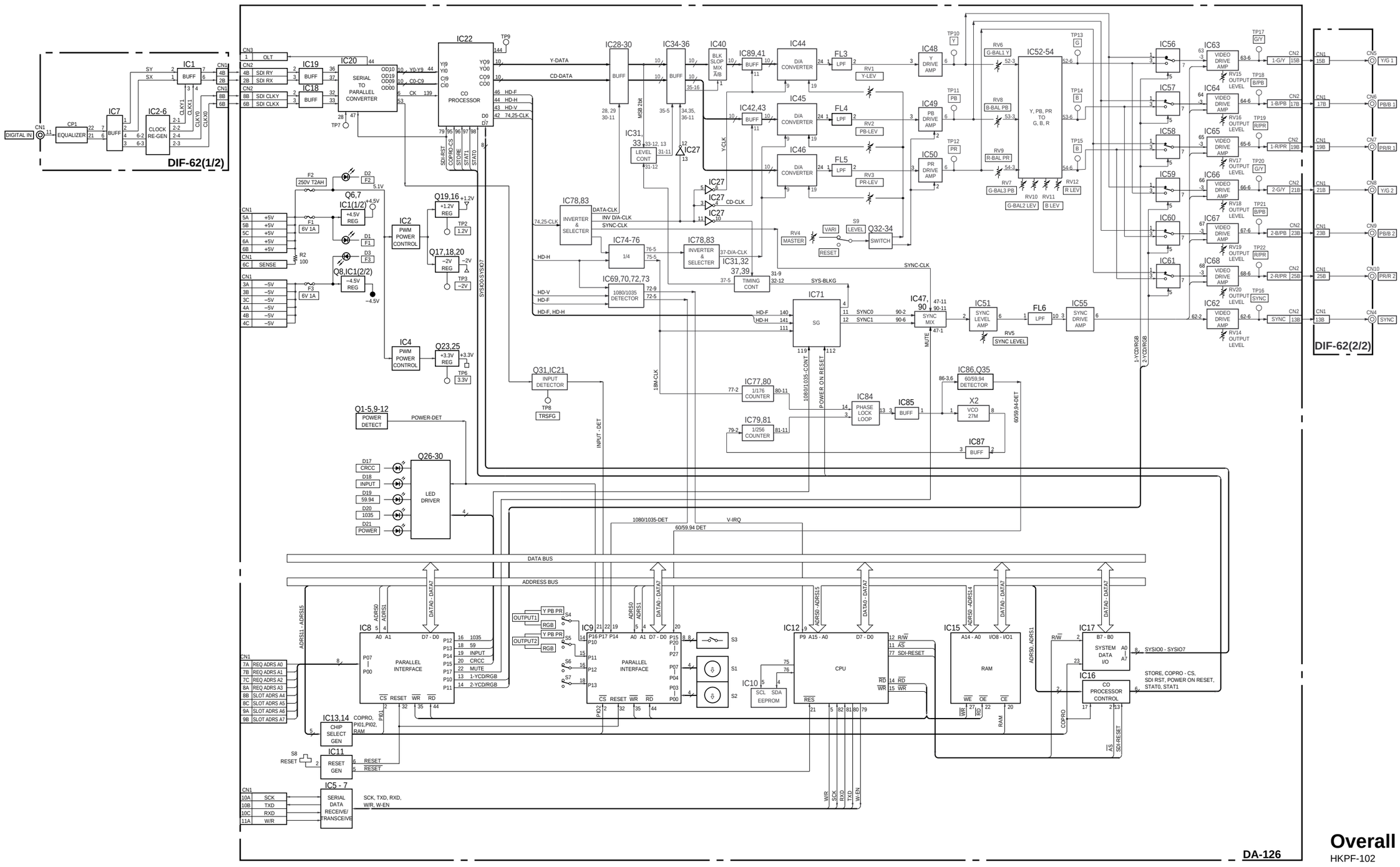
∗ : TEST (at X24164SIC7000)
NC(at NM24C16LEM8)

Section 6
Block Diagram

HKPF-102 (UCJ) : S/N 11001 and Higher
HKPF-102 (J) : S/N 30301 and Higher



HKPF-102 (J) : S/N 30001 through 30300

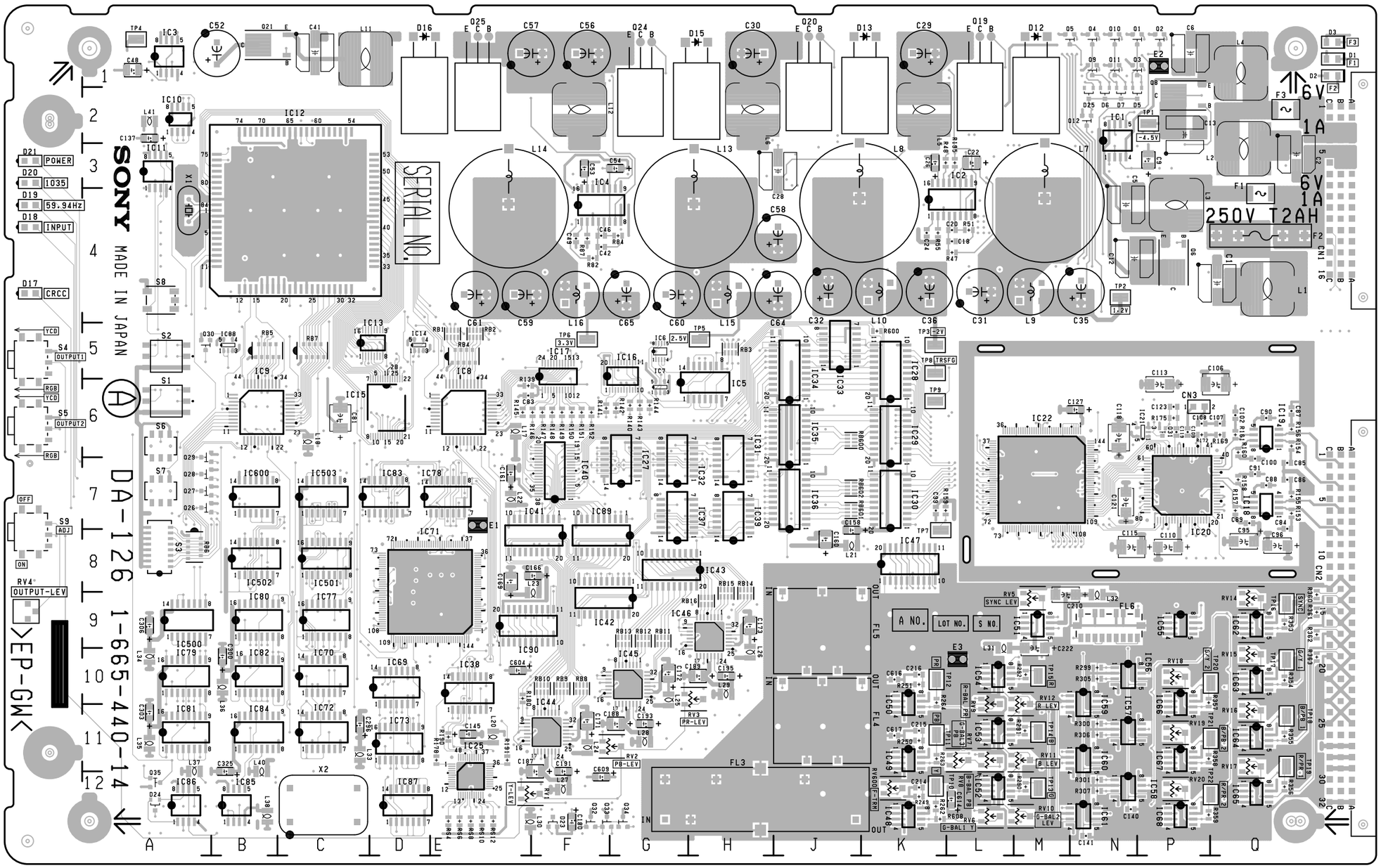


http://getMANUAL.com

Section 7
Board Layouts

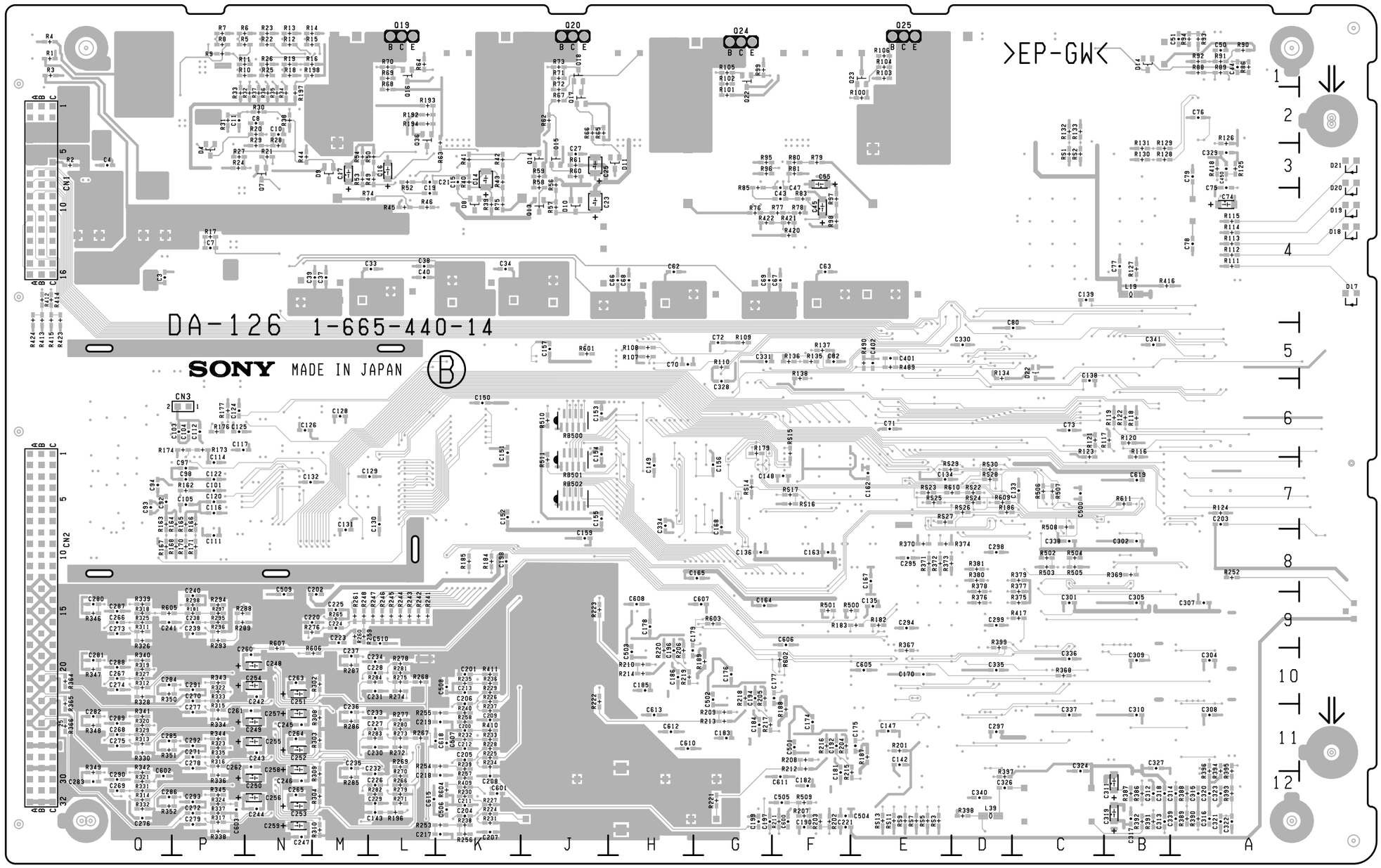
DA-126(1-665-440-14)

C1	Q4	C93	*Q7	C187	F12	C279	*P12	C617	K11	IC49	K11	Q6	P4	R61	*J3	R153	Q7	R247	*L9	R339	*Q9	R606	*M10	TP5	H5
C2	Q3	C94	*Q7	C188	G11	C280	*Q9	C618	*K11	IC50	K10	Q7	*N3	R62	*J2	R154	Q6	R248	*M9	R340	*Q10	R607	*N10	TP6	F5
C3	*Q4	C95	Q8	C189	H10	C281	*Q10	C619	*B7	IC51	M9	Q8	P2	R63	*K3	R155	Q7	R249	K12	R341	*Q11	R608	K12	TP7	K8
C4	*Q3	C96	Q8	C190	*F12	C282	*Q11			IC52	L12	Q9	N1	R64	*L1	R156	Q6	R250	K11	R342	*Q12	R609	*D7	TP8	K5
C5	N4	C97	*P7	C191	F12	C283	*Q12	CN1	Q4	IC53	L11	Q10	N1	R65	*J2	R157	Q7	R251	K10	R343	*P10	R610	*D7	TP9	K6
C6	P1	C98	*P7	C192	*F11	C284	*Q10	CN2	Q9	IC54	L10	Q11	N1	R66	*J2	R158	Q7	R252	*A8	R344	*P11	R611	*B7	TP10	K12
C7	*P4	C99	K7	C193	G11	C285	*Q11	CN3	P6	IC55	P9	Q12	N2	R67	*J2	R159	K7	R253	*K12	R345	*P12			TP11	K11
C8	*N2	C100	Q7	C194	*G10	C286	*Q12			IC56	N10	Q13	*J4	R68	*L2	R160	Q6	R254	*K11	R346	*Q9	RB1	E5	TP12	K10
C9	P3	C101	*P7	C195	H10	C287	*Q9	D1	Q1	IC57	N11	Q14	*J3	R69	*L1	R161	Q6	R255	*K11	R347	*Q10	RB2	E5	TP13	M12
C10	*N2	C102	Q6	C196	*H10	C288	*Q10	D2	Q1	IC58	N12	Q15	*J3	R70	*L1	R162	*P7	R256	*K12	R348	*Q11	RB3	H5	TP14	M11
C11	*P2	C103	*P6	C197	*G12	C289	*Q11	D3	Q1	IC59	M10	Q16	*L1	R71	*J1	R163	*Q7	R257	*K12	R349	*Q12	RB4	E5	TP15	M10
C12	N4	C104	*P6	C198	*K8	C290	*Q12	D4	*P3	IC60	M11	Q17	*J2	R72	*J2	R164	*P7	R258	*K11	R350	*Q10	RB5	B5	TP16	Q9
C13	P2	C105	*P7	C199	*G12	C291	*P10	D5	N2	IC61	M12	Q18	*J1	R73	*J1	R165	*P7	R259	*M9	R351	*Q11	RB6	A8	TP17	Q10
C14	*K3	C106	Q6	C200	*K11	C292	*P11	D6	N2	IC62	Q9	Q19	L1	R74	*L4	R166	*P7	R260	*M9	R352	*Q12	RB7	C5	TP18	Q11
C15	*K3	C107	Q6	C201	*K10	C293	*P12	D7	N2	IC63	Q10	Q20	J1	R75	*K4	R167	*Q8	R261	*M9	R353	Q9	RB8	F10	TP19	Q11
C16	*L3	C108	P6	C202	*M9	C294	*E9	D8	*K4	IC64	Q11	Q21	B1	R76	*G4	R168	*P8	R262	K12	R354	Q10	RB9	F10	TP20	Q10
C17	*M3	C109	P6	C203	*A7	C295	*E8	D9	*M3	IC65	Q12	Q22	*G1	R77	*F4	R169	Q6	R263	K11	R355	Q11	RB10	F10	TP21	Q11
C18	L4	C110	P8	C204	*K12	C296	C11	D10	*J4	IC66	P10	Q23	*E1	R78	*F4	R170	*P8	R264	K10	R356	Q12	RB11	G9	TP22	Q12
C19	*L4	C111	*P8	C205	*K11	C297	*D11	D11	*H3	IC67	P11	Q24	G1	R79	*F3	R171	*P8	R265	*M9	R357	P10	RB12	G9		
C20	L4	C112	*P6	C206	*K11	C298	*D8	D12	M1	IC68	P12	Q25	E1	R80	*F3	R172	P6	R266	*L12	R358	P11	RB13	G9	X1	A4
C21	*L3	C113	P6	C207	*K12	C299	*D9	D13	K1	IC69	D11	Q26	A7	R81	*F3	R173	*P6	R267	*L11	R359	P12	RB14	H9	X2	C12
C22	L3	C114	*P7	C208	*K12	C300	B10	D14	*B1	IC70	C10	Q27	A7	R82	F4	R174	*P6	R268	*L10	R360	Q9	RB15	H9		
C23	*J4	C115	N8	C209	*K11	C301	*C9	D15	H1	IC71	D9	Q28	A7	R83	*F4	R175	P6	R269	*L11	R361	Q9	RB16	H9	*:B SIDE	
C24	K4	C116	*P7	C210	M9	C302	*B8	D16	D1	IC72	C11	Q29	A7	R84	G4	R176	*P6	R270	*L12	R362	Q9	RB500	*J6		
C25	*J3	C117	*P6	C211	*K12	C303	A11	D17	A4	IC73	D11	Q30	A5	R85	*G4	R177	*P6	R271	*L12	R363	Q10	RB501	*J7		
C26	K3	C118	N6	C212	*K11	C304	*A10	D18	A4	IC77	C9	Q31	P6	R86	*A1	R178	E11	R272	*L11	R364	*Q10	RB502	*J7		
C27	*J3	C119	P6	C213	*K10	C305	*B9	D19	A4	IC78	E7	Q32	F12	R87	F4	R179	*G6	R273	*L11	R365	*Q11	RB600	J6		
C28	J3	C120	*P7	C214	K12	C306	A9	D20	A3	IC79	A10	Q33	F12	R88	*A1	R180	E10	R274	*L10	R366	*Q11	RB601	J7		
C29	K1	C121	N7	C215	K11	C307	*A9	D21	A3	IC80	B9	Q34	G12	R89	*A1	R181	*P9	R275	*L10	R367	*E10	RB602	J7		
C30	H1	C122	*P7	C216	K10	C308	*A11	D22	*C5	IC81	A11	Q35	A12	R90	*A1	R182	*E9	R276	*M9	R368	*C10				
C31	L4	C123	P6	C217	*K12	C309	*B10	D23	F12	IC82	B10	Q36	*L2	R91	*A1	R183	*E9	R277	*L11	R369	*B8	RS1	*C3		
C32	J4	C124	*P6	C218	*K12	C310	*B11	D24	A12	IC83	C7			R92	*A1	R184	*K8	R278	*L10	R370	*E8	RS2	*C3		
C33	*L4	C125	*P6	C219	*K11	C311	*B12	D25	N2	IC84	B11	R1	*Q1	R93	*A1	R185	*K8	R279	*L12	R371	*E8	RS3	*E12		
C34	*K4	C126	*N6	C220	*M9	C312	*B12			IC85	B12	R2	*Q3	R94	*A1	R186	*D7	R280	*L11	R372	*E8	RS4	E12		
C35	N4	C127	N6	C221	*F12	C313	*B12	E1	E7	IC86	A12	R3	*Q1	R95	*G3	R187	*E11	R281	*L10	R373	*D8	RS5	*E12		
C36	K4	C128	*M6	C222	M10	C314	*A12	E2	P1	IC87	D12	R4	*Q1	R96	*G3	R188	*F11	R282	*L12	R374	*E8	RS6	E12		
C37	*M4	C129	*L7	C223	*M9	C315	*A12	E3	L10	IC88	B5	R5	*N1	R97	*F4	R189	*G10	R283	*L11	R375	*C9	RS7	*E12		
C38	*L4	C130	*L7	C224	*M9	C316	*A12			IC89	G7	R6	*N1	R98	*F4	R190	E11	R284	*L10	R376	*D9	RS8	E12		
C39	*M4	C131	*M8	C225	*M9	C317	*B12	F1	Q4	IC90	E9	R7	*P1	R99	*G1	R191	E11	R285	*M12	R377	*C9	RS9	*E12		
C40	*L4	C132	*N7	C226	*L12	C318	*B12	F2	Q4	IC500	A9	R8	*P1	R100	*E2	R192	*L2	R286	*M11	R378	*D9	RS10	E12		
C41	C1	C133	*C7	C227	*L11	C319	*B12	F3	Q2	IC501	C8	R9	*P1	R101	*G2	R193	*L2	R287	*M10	R379	*C8	RS11	*E12		
C42	F4	C134	*E7	C228	*L10	C320	*A12			IC502	B8	R10	*N1	R102	*G1	R194	*L2	R288	*P9	R380	*D8	RS12	E12		
C43	*F4	C135	*E9	C229	*L12	C321	*A12	FL3	H12	IC503	C7	R11	*N1	R103	*E1	R195	L3	R289	*P9	R381	*D8	RS13	*E12		
C44	*A1	C136	*G8	C230	*L11	C322	*A12	FL4	J11	IC600	B7	R12	*N1	R104	*E1	R196	*L12	R290	M12	R386	*B12	RS14	*G7		
C45	*F4	C137	A2	C231	*L10	C323	*A12	FL5	J9			R13	*N1	R105	*G1	R197	*N2	R291	M11	R387	*B12	RS15	*F6		
C46	F4	C138	*C6	C232	*L12	C324	*C12	FL6	N9	L1	Q4	R14	*M1	R106	*E1	R198	*M1	R292	M10	R388	*A12	RS16	*F7		
C47	*F4	C139	*C4	C233	*L11	C325	B12			L2	Q3	R15	*M1	R107	*H5	R201	*E11	R293	*P9	R389	*A12	RS17	*F7		
C48	A1	C140	N12	C234	*L10	C326	*D12	IC1	N3	L3	P4	R16	*M1	R108	*H5	R202	*F12	R294	*P9	R390	*A12	RS22	*D7		
C49	F4	C141	N12	C235	*M11	C327	*B11	IC2	K4	L4	Q1	R17	*P4	R109	*G5	R203	*F12	R295	*P9	R391	*B12	RS23	*E7		
C50	*A1	C142	*E11	C236	*M11	C328	*G6	IC3	A1	L5	K2	R18	*N1	R110	*G5	R204	*F11	R296	*P9	R392	*B12	RS24	*D7		
C51	*A1	C143	*L12	C237	*M10	C329	*A3	IC4	F4	L6	H2	R19	*N1	R111	*A4	R205	*G10	R297	*P9	R393	*A12	RS25	*E7		
C52	B1	C145	E11	C238	*P9	C330	*D5	IC5	G6	L7	M3	R20	*N2	R112	*A4	R206	*H10	R298	*P9	R394	*A12	RS26	*D7		
C53	F3	C147	*E11	C239	*P9	C331	*G5	IC6	G5	L8	J3	R21	*N3	R113	*A4	R207	*F12	R299	N10	R395	*A12	RS27	*E7		
C54	G3	C148	*F7	C240	*P9	C334	*H7	IC7	G6	L9	M4	R22	*N1	R114	*A4	R208	*F11	R300	N11	R396	*A12	RS28	*D7		
C55	*F3	C149	*H7	C241	*Q9	C335	*D10	IC8	E6	L10	K4	R23	*N1	R115	*A4	R209	*G11	R301	N12	R397	*D12	RS29	*E7		
C56	F1	C150	*K6	C242	*N10	C336	*C10	IC9	B6	L11	C1	R24	*P3	R116	*B7	R210	*H10	R302	*M10	R398	*D12	RS30	*D7		
C57	E1	C151	*K6	C243	*N11	C337	*C11	IC10	A2	L12	F2	R25	*N1	R117	*B6	R211	*F12	R303	*M11	R399	*D10				
C58	J4	C152	*K7	C244	*N12	C338	*C8	IC11	A4	L13	H3	R26	*N1	R118	*B6	R212	*F11	R304	*M12	R409	*K12	RV1	E12		
C59	E4	C153	*J6	C245	*N11	C339	*A12	IC12	C4	L14	E3	R27	*P3	R119	*B6	R213	*G11	R305	N10	R410	*K11	RV2	G11		
C60	G4	C154	*J6	C246	*N12	C340	*D12	IC13	C5	L15	H4	R28	*N3	R120	*B6	R214	*H10	R306	N11	R411	*K10	RV3	H10		
C61	E4	C155	*J7	C247	*N12	C341	*B5	IC14	D5	L16	F4	R29	*N3	R121	*C6	R215	*E12	R307	N12	R412	*Q4	RV4	A9		
C62	*H4	C156	*G7	C248	*N10	C401	*E5	IC15	D6	L17	E6	R30	*N2	R122	*B6	R216	*F11	R308	*M11	R413	*Q4	RV5	M9		
C63	*F4	C157	*J5	C249	*N11	C402	*E5	IC16	F6	L18	C6	R31	*P2	R123	*C7	R217	*G11	R309	*M12	R414	*Q4	RV6	L12		
C64	J4	C158	J8	C250	*N12	C450	*A3	IC17	F6	L19	*B4	R32	*N2	R124	*A7	R218	*G10	R310	*M12	R415	*Q4	RV7	L11		
C65	G4	C159	*J8	C251	*N10	C500	*C7	IC18	Q7	L20	E11	R33	*P2	R125	*A3	R219	*H10	R311	*Q9	R416	*B4	RV8	L11		
C66	*H4	C160	J8	C252	*N11	C501	*F11	IC19	Q6	L21	J8	R34	*N2	R126	*A3	R220	*H10	R312	*Q10	R417	*C9	RV9	L11		
C67	*F4	C161	E7	C253	*N12	C502	*G10	IC20	P7	L22	E7	R35	*N2	R127	*B4	R221	*G12	R313	*Q11	R418	*A3	RV10	M12		
C68	*H4	C162	*E7	C254	*N10	C503	*H10	IC21	P6	L23	F9	R36	*N2	R128	*B3	R222	*J10	R314	*Q12	R420	*F4	RV11	M11		
C69	*G4	C163	*F8	C255	*N11	C504	*F12	IC22	M7	L24	F11	R37	*N2	R129	*B3	R223	*J9	R315	*P11	R421	*F4	RV12	M11		
C70	*H5	C164	*G9	C256	*N12	C505	*F12	IC25	E12	L25	G10	R38	*N2	R130	*B3	R224	*K12	R316	*P11	R422	*G4	RV14	Q9		
C71	*E6	C165	*G8	C257	*N11	C506	*K12	IC27	G7	L26	H10	R39	*K4	R131	*B3	R225	*K11	R317	*P12	R423	*Q4	RV15	Q10		
C72	*G5	C166	F8	C258	*N11	C507	*K11	IC28	K6	L27	F12	R40	*K3	R132	*C2	R226	*K10	R318	*Q9	R424	*Q4	RV16	Q11		
C73	*C6	C167	*E8	C259	*N12	C508	*K10	IC29	K7	L28	G11	R41	*K3	R133	*C2	R227	*K12	R319	*Q10	R489	*E5	RV17	Q11		
C74	*A4	C168	*G7	C260	*N10	C509	*N9	IC30	K7	L29	H10	R42	*K3	R134	*D6	R228	*K11	R320	*Q11	R490	*E5	RV18	P10		
C75	*A4	C169	E8	C261	*N11	C510	*L9	IC31	H7	L30	E12	R43	*K3	R135	*F5	R229	*K10	R321	*Q12	R500	*E9	RV19	P11		
C76	*A2	C170	*E10	C262	*N11	C600	*F12	IC32	H7	L31	L10	R44	*N3	R136	*F5	R230	*K12	R322	*P10	R501	*F9	RV20	P12		
C77	*B4	C171	F11	C263	*N10	C601	*K12	IC33	J5	L32	N9	R45	*L4	R137	*F5	R231	*K12	R323	*P11	R502	*C8	RV600	K12		
C78	*A4	C172	G10	C264	*N11	C602	*Q12	IC34	J6	L33	C11	R46	*L4	R138	*F6	R232	*K11	R324	*P12	R503	*C8				
C79	*A3	C173	H9	C265	*N12	C603	*P12	IC35	J7	L34	A10	R47	L4	R139	E6	R233	*K11	R325	*Q9	R504	*C8	S1	A6		
C80	*C5	C174	*F11	C266	*Q9	C604	E10	IC36	J7	L35	A11	R48	K3	R140	G6	R234	*K11	R326	*Q9	R505	*C8	S2	A5		
C81	C6	C175	*E11	C267	*Q10	C605	*E10	IC37	H8	L36	B10	R49	*L3	R141	F6	R235	*K10	R327	*Q10	R506	*C7	S3	A8		
C82	*F5	C176	*G10	C268	*Q11	C606	*F9	IC38	E11	L37	A12	R50	*L3	R142	G6	R236	*K10	R328	*Q10	R507	*C7	S4	A5		
C83	E6	C177	*F10	C269	*Q12	C607	*G9	IC39	H8	L38	B12	R51	L4	R143	G6	R237	*K11	R329	*Q11	R508	*C7	S5	A6		
C84	Q7	C178	*H9	C270	*P10	C608	*H9	IC40	F7	L39	*D12	R52	*L3	R144	G6	R238	*K12	R330	*Q11	R509	*F12	S6	A6		
C85	Q7	C179	*H10	C271	*P11	C609	F12	IC41	F7	L40	B12	R53	*M3	R145	E6	R239	*K11	R331	*Q12	R510	*J6	S7	A7		
C86	Q7	C180	F12	C272	*P12	C610	*H11	IC42	G8	L41	A2	R54	*M3	R146	F6	R240	*K11	R332	*Q12	R511	*J7	S8	A4		
C87	Q6	C181	*F12	C273	*Q9	C611	*F12	IC43	H8			R55	K4	R147	F6	R241	*L9	R333	*P10	R600	K5	S9	A8		
C88	Q7	C182	*F12	C274	*Q10	C612	*H11	IC44	F11	Q1	N1	R56	*J3	R148	F6	R242	*L9	R334	*P11	R601	*J5				
C89	Q7	C183	*G11	C275	*Q11	C613	*H11	IC45	G10	Q2	P1	R57	*J4	R149	F6	R243	*L9	R335	*P11	R602	*F10	TP1	P2		
C90	Q6	C184	*G11	C276	*Q12	C614	L12	IC46	H9	Q3	N1	R58	*J4	R150	F6	R244	*L9	R336	*P12	R603	*G9	TP2	N4		
C91	Q7	C185	*H10	C277	*P11	C615	*L12	IC47	K8	Q4	N1	R59	*J3	R151	F6	R245	*L9	R337	*P12	R604	*K12	TP3	K5		
C92	*Q7	C186	*H10	C278	*P11	C616	K10	IC48	K12	Q5	M1	R60	*J3	R152	F6	R246	*L9	R338	*P12	R605	*Q9	TP4	A1		

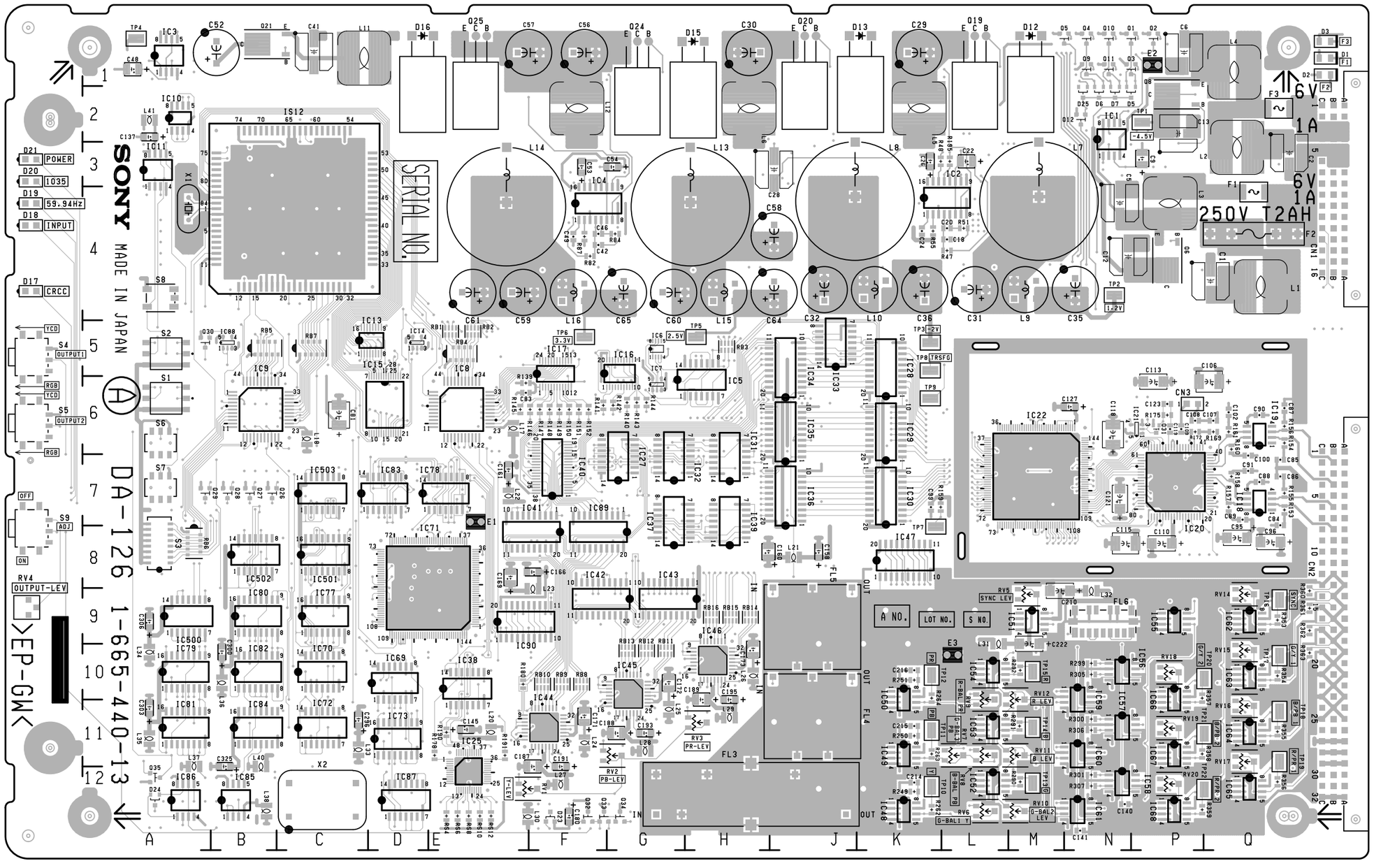


HKPF-102 (UCJ) : S/N 11101 and Higher

DA-126 -A SIDE-
1-665-440-14

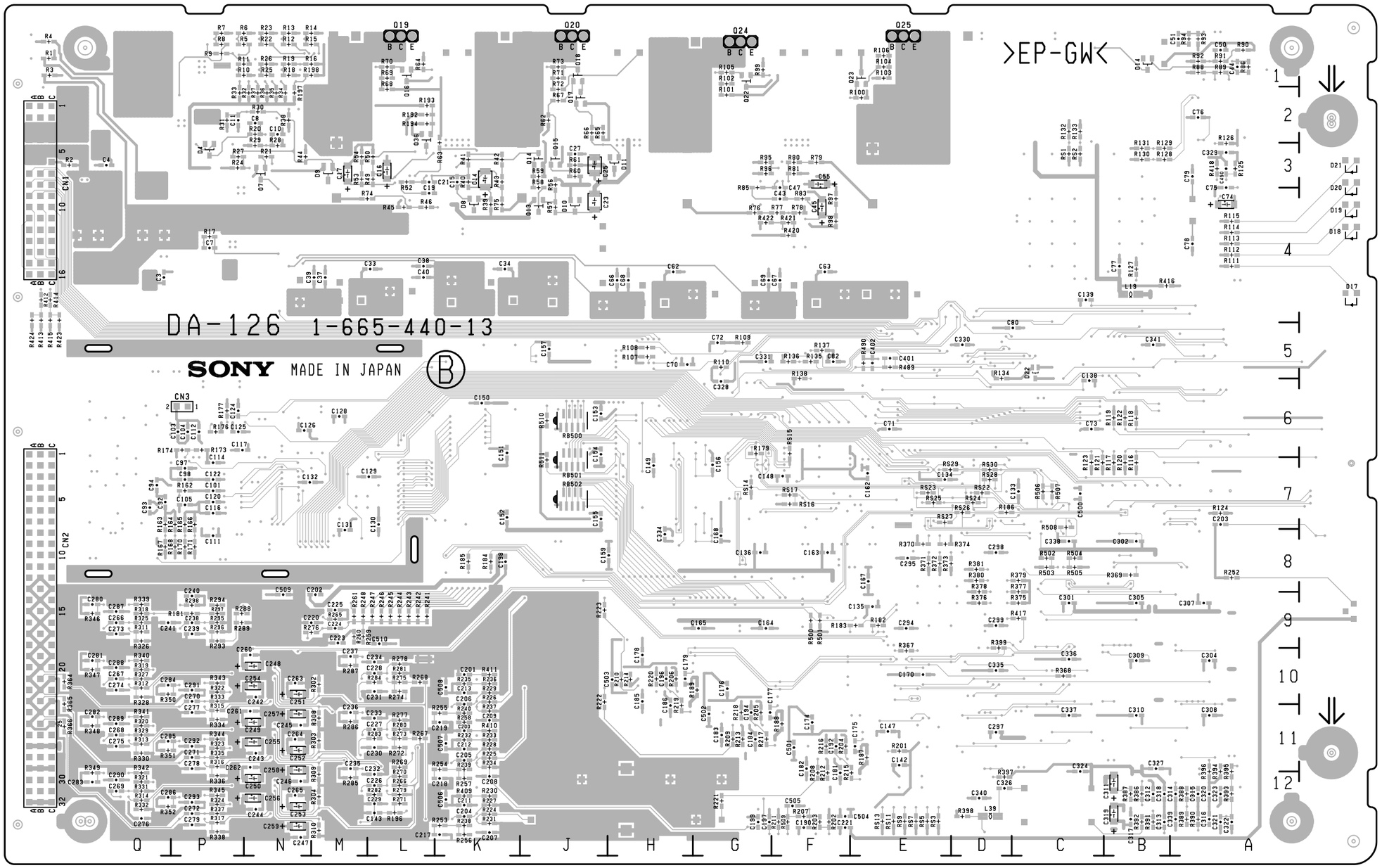


DA-126 -B SIDE-
1-665-440-14

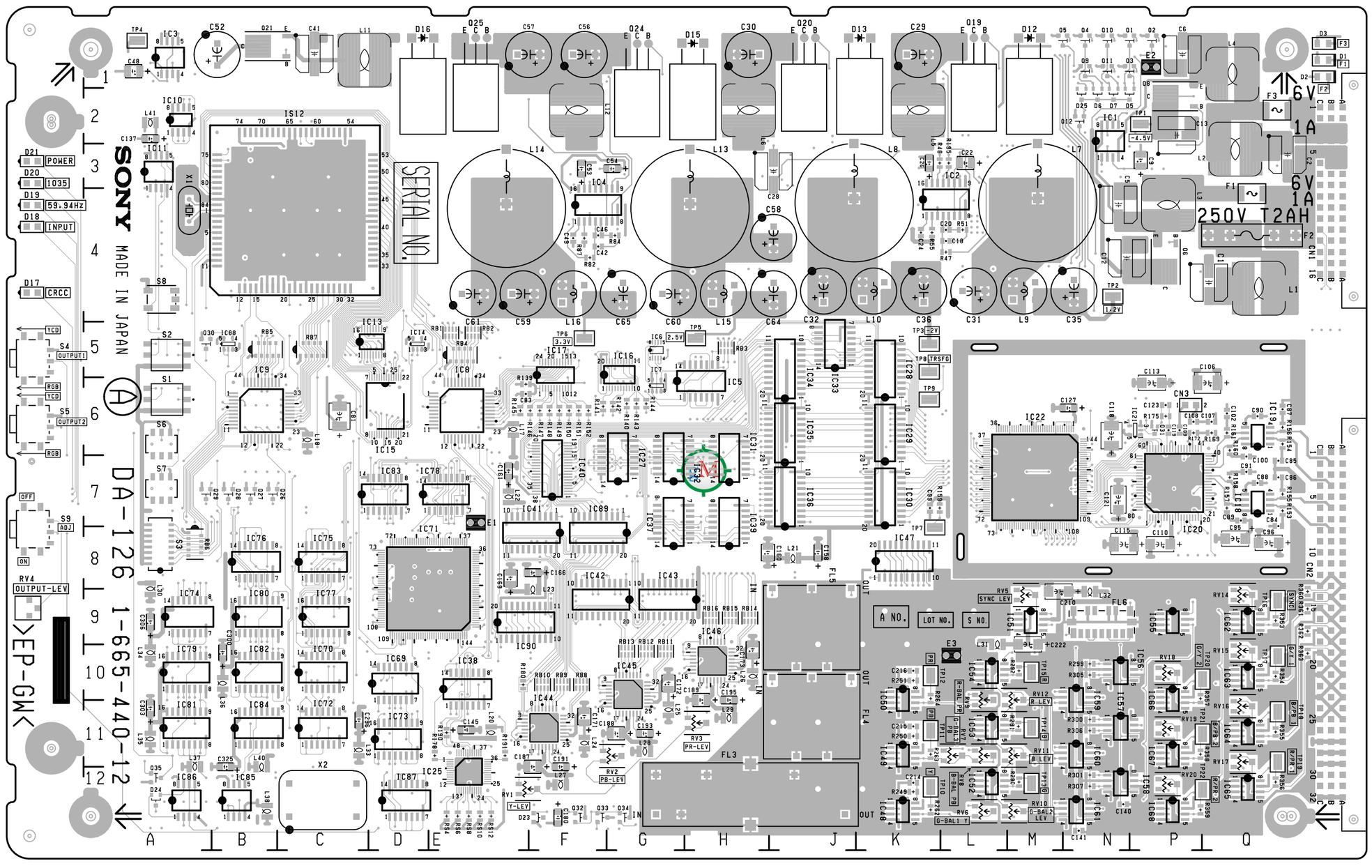


HKPF-102 (UCJ) : S/N 11001 through 11100
HKPF-102 (J) : S/N 30301 through 30500

DA-126 -A SIDE-
1-665-440-13

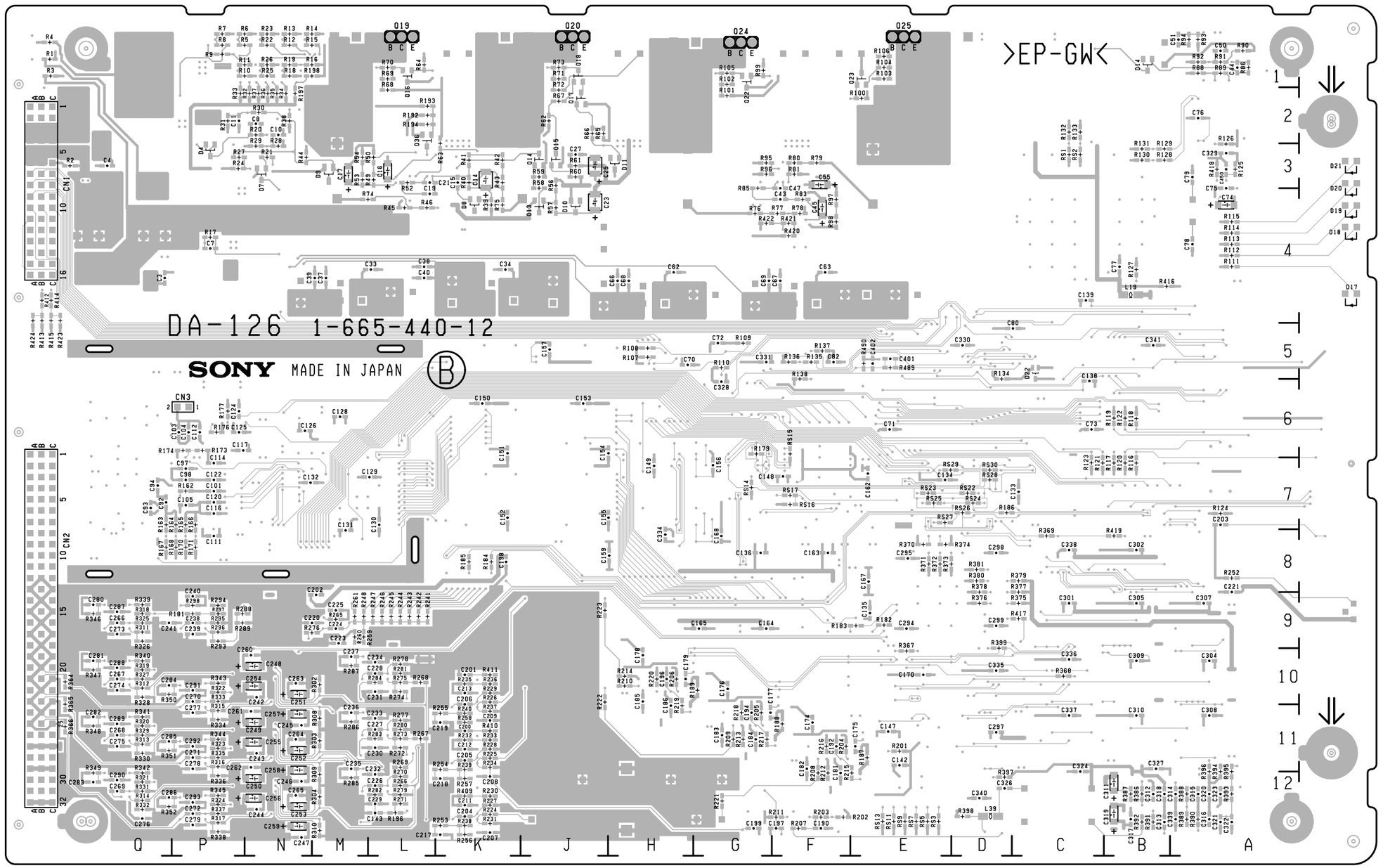


DA-126 -B SIDE-
1-665-440-13

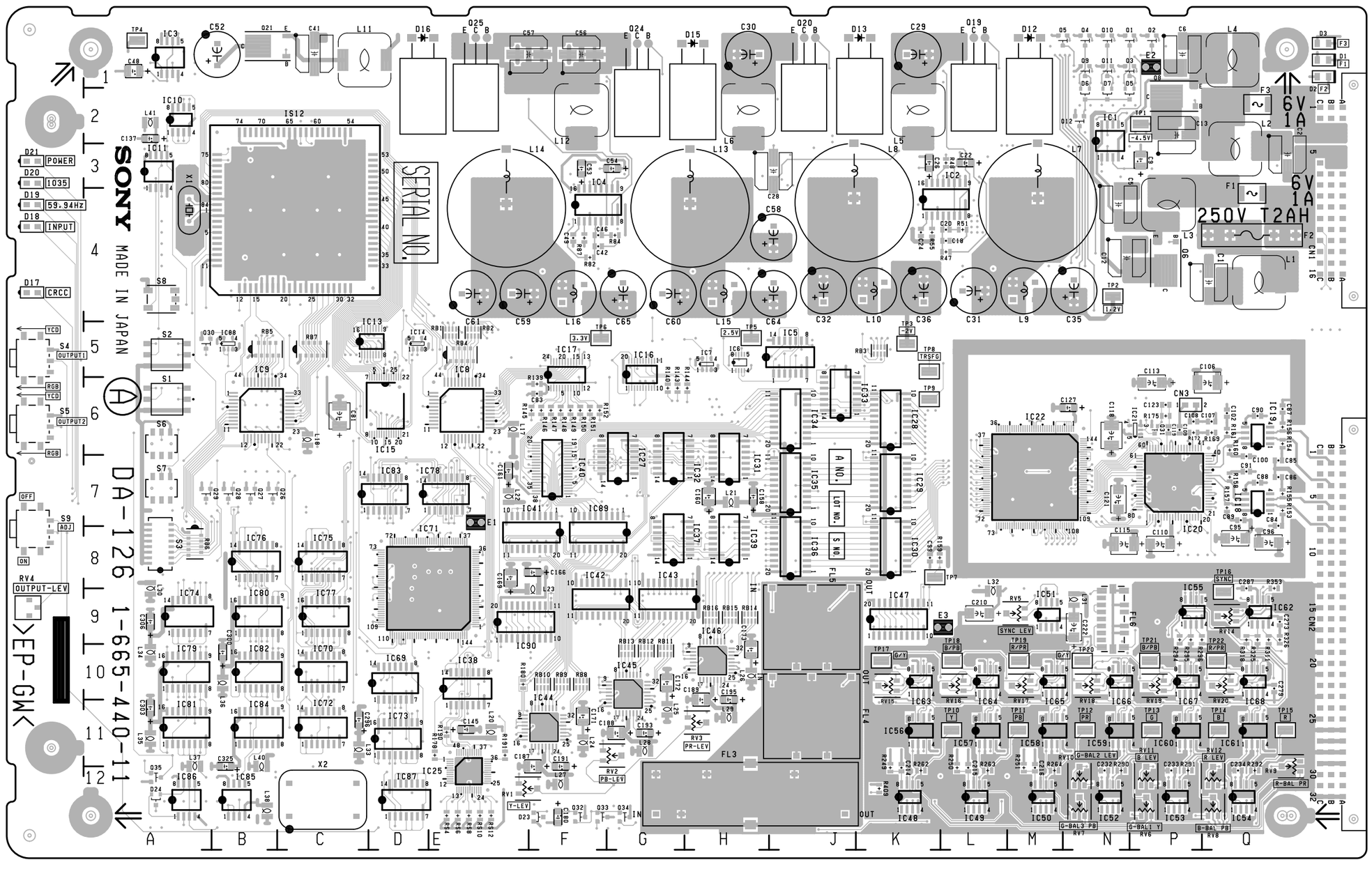


HKPF-102 (J) : S/N 30101 through 30300

DA-126 -A SIDE-
1-665-440-12

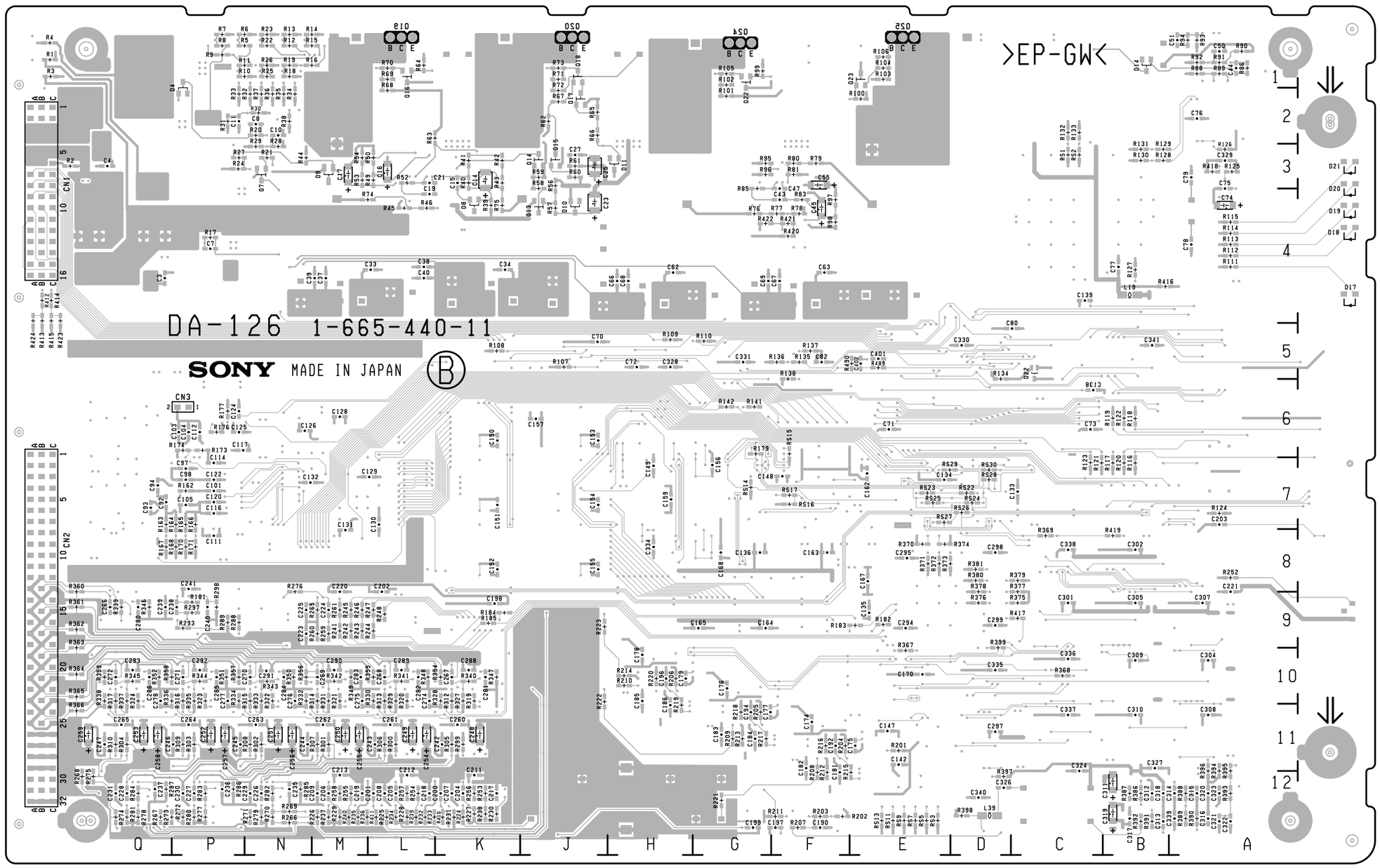


DA-126 -B SIDE-
1-665-440-12



HKPF-102 (J) : S/N 30001 through 30100

DA-126 -A SIDE-
1-665-440-11



DA-126 -B SIDE-
1-665-440-11

DA-126(1-665-440-11/-12/-13)

C1 Q4
C2 Q3
C3 *Q4
C4 *Q3
C5 N4
C6 P1
C7 *P4
C8 *N2
C9 P3
C10 *N2 (#2, 3)
C11 *P2
C12 N4
C13 P2
C14 *K3
C15 *K3
C16 *L3
C17 *M3
C18 L4
C19 *L4
C20 L4
C21 *L3
C22 L3
C23 *J4
C24 K4
C25 *J3
C26 K3
C27 *J3
C28 J3
C29 K1
C30 H1
C31 L4
C32 J4
C33 *L4
C34 *K4
C35 N4
C36 K4
C37 *M4
C38 *L4
C39 *M4
C40 *L4
C43 *F4
C45 *F4
C47 *F4
C49 F4
C53 F3
C54 G3
C55 *F3
C57 E1
C59 E4
C61 E4
C63 *F4
C65 G4
C67 *F4
C69 *G4
C70 *H5 (#2, 3)
C70 *J5 (#1)
C71 *E6
C72 *G5 (#2, 3)
C72 *H5 (#1)
C73 *C6
C74 *A4
C75 *A4
C76 *A2
C77 *B4
C78 *A4
C79 *A3
C80 *C5
C81 C6
C82 *F5
C83 E6 (#2, 3)
C83 F6 (#1)
C84 Q7
C85 Q7
C86 Q7
C87 Q6
C88 Q7
C89 Q7
C90 Q6
C91 Q7
C92 *Q7
C93 *Q7
C94 *Q7
C95 Q8
C96 Q8
C97 *P7
C98 *P7
C99 K7 (#2, 3)
C99 K8 (#1)
C100 Q7
C101 *P7
C102 Q6
C103 *P6
C104 *P6
C105 *P7
C106 Q6
C107 Q6
C108 P6
C109 P6
C110 P8
C111 *P8
C112 *P6
C113 P6
C114 *P7
C115 N8
C116 *P7
C117 *P6
C118 N6
C119 P6
C120 *P7
C121 N7
C122 *P7
C123 P6
C124 *P6
C125 *P6
C126 *N6
C127 N6
C128 *M6
C129 *L7
C130 *L7
C131 *M8
C132 *N7
C133 *C7
C134 *E7
C135 *E9
C136 *G8
C137 A2
C138 *C6 (#3)
C139 *C4 (#3)
C142 *E11
C143 *L12(#2, 3)
C145 E11
C147 *E11
C148 *F7
C149 *H7
C150 *K6
C151 *K6 (#2, 3)
C151 *K7 (#1)
C152 *K7 (#2, 3)
C152 *K8 (#1)
C153 *J6
C154 *H6 (#2, 3)
C154 *J7 (#1)
C155 *H7 (#2, 3)
C155 *J8 (#1)
C156 *G7
C157 *J5 (#2, 3)
C157 *J6 (#1)
C158 H7 (#1)
C158 J8 (#2, 3)
C159 *H7 (#1)
C159 *H8 (#2, 3)
C160 H7 (#1)
C160 H8 (#2, 3)
C161 E7
C162 *E7
C163 *F8
C164 *G9
C165 *G9
C166 F8
C167 *E8
C168 *G8
C169 E8
C170 *E10
C171 F11
C172 G10
C173 H10
C174 *F11
C175 *E11
C176 *G10
C177 *G11
C178 *H10
C179 *H10
C180 F12
C181 *F12
C182 *F11
C183 *G11
C184 *G11
C185 *H10
C186 *H11
C187 F12
C188 G11
C189 H11
C190 *F12
C191 F12
C192 *F11
C193 G11
C194 *G11
C195 H11
C196 *H10
C197 *F12
C198 *K8 (#2, 3)
C198 *K9 (#1)
C199 *G12
C200 *K11(#2, 3)
C200 *K12(#1)
C201 *K10(#2, 3)
C201 *L12(#1)
C202 *L9 (#1)
C202 *M9 (#2, 3)
C203 *A7
C205 *K11(#3)
C206 *K11(#3)
C207 *K12
C208 *K12(#2, 3)
C208 *L12(#1)
C209 *K11(#2, 3)
C209 *M12(#1)
C210 L9 (#1)
C210 M9 (#2, 3)
C211 *K12
C212 *K11(#2, 3)
C212 *L12(#1)
C213 *K10(#2, 3)
C213 *M12(#1)
C214 K12
C215 K11(#2, 3)
C215 L12(#1)
C216 K10(#2, 3)
C216 M12(#1)
C218 *K12(#3)
C219 *K11(#3)
C220 *M9
C221 *A9
C222 M10(#2, 3)
C222 N9 (#1)
C253 *Q11(#1)
C254 *L11(#1)
C254 *N10(#2, 3)
C255 *M11(#1)
C255 *N11(#2, 3)
C256 *N11(#1)
C256 *N12(#2, 3)
C257 *N11(#2, 3)
C257 *P11(#1)
C258 *N11(#2, 3)
C258 *Q11(#1)
C259 *N12(#2, 3)
C259 *Q11(#1)
C260 *K11(#1)
C260 *N10(#2, 3)
C261 *L11(#1)
C261 *N11(#2, 3)
C262 *M11(#1)
C262 *N11(#2, 3)
C263 *N10(#2, 3)
C263 *N11(#1)
C264 *N11(#2, 3)
C264 *P11(#1)
C265 *N12(#2, 3)
C265 *Q11(#1)
C267 *K10(#1)
C267 *Q10(#2, 3)
C268 *L10(#1)
C268 *Q11(#2, 3)
C269 *M10(#1)
C269 *Q12(#2, 3)
C270 *N10(#1)
C270 *P10(#2, 3)
C271 *P10(#1)
C271 *P11(#2, 3)
C272 *P12(#2, 3)
C272 *Q10(#1)
C273 *Q9
C274 *L10(#1)
C274 *Q10(#2, 3)
C275 *M10(#1)
C275 *Q11(#2, 3)
C276 *N10(#1)
C276 *Q12(#2, 3)
C277 *P10(#1)
C277 *P11(#2, 3)
C278 *P11(#2, 3)
C278 *Q10(#1)
C279 Q10(#1)
C279 *P12(#2, 3)
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C281 *K10(#1)
C281 *Q10(#2, 3)
C282 *L10(#1)
C282 *Q11(#2, 3)
C283 *M10(#1)
C283 *Q12(#2, 3)
C284 *N10(#1)
C284 *Q10(#2, 3)
C285 *P10(#1)
C285 *Q11(#2, 3)
C286 *Q10(#1)
C286 *Q12(#2, 3)
C287 *Q9
C288 *K10(#1)
C288 *Q10(#2, 3)
C289 *L10(#1)
C289 *Q11(#2, 3)
C290 *M10(#1)
C290 *Q12(#2, 3)
C291 *N10(#1)
C291 *P10(#2, 3)
C292 *P10(#1)
C292 *P11(#2, 3)
C293 *P12(#2, 3)
C293 *Q10(#1)
C294 *E9
C295 *E8
C296 C11
C297 *D11
C298 *D8
C299 *D9
C300 B10
C301 *C9
C302 *B8
C303 A11
C304 *A10
C305 *B9
C306 A9
C307 *A9
C308 *A11
C309 *B10
C310 *B11
C311 *B12
C312 *B12
C313 *B12
C314 *A12
C315 *A12
C316 *A12
C317 *B12
C318 *B12
C319 *B12
C320 *A12
C321 *A12
C322 *A12
C323 *A12
C324 *C12
C325 B12
C326 *D12
C327 *B11
C328 *G6 (#2, 3)
C328 *H5 (#1)
C329 *A3
C330 *D5
C331 *G5
C334 *H8
C335 *D10
C336 *C10
C337 *C11
C338 *C8
C339 *A12
C340 *D12
C341 *B5
C401 *E5
C402 *E5
C450 *A3 (#2, 3)
CN1 Q4
CN2 Q9
CN3 P6
IC10 A2
IC11 A4
IC12 C4
IC13 C5
IC14 D5
IC15 D6
IC16 F6 (#2, 3)
IC16 G6 (#1)
IC17 F6
IC18 Q7
IC19 Q6
IC20 P7
IC21 P6
IC22 M7
IC25 E12
IC27 G7
IC28 K6
IC29 K7
IC30 K7 (#2, 3)
IC30 K8 (#1)
IC31 H7
IC32 H7
IC33 J5 (#2, 3)
IC33 K6 (#1)
IC34 J6
IC35 J7
IC36 J7 (#2, 3)
IC36 J8 (#1)
IC37 H8
IC38 E11
IC39 H8
IC40 F7
IC41 F7
IC42 G8
IC43 H8
IC44 F11
IC45 G10
IC46 H10
IC47 K8 (#2, 3)
IC47 K9 (#1)
IC48 K12
IC49 K11(#2, 3)
IC49 L12(#1)
IC50 K10(#2, 3)
IC50 M12(#1)
IC51 M9
IC52 L12(#2, 3)
IC52 N12(#1)
IC53 L11(#2, 3)
IC53 P12(#1)
IC54 L10(#2, 3)
IC54 Q12(#1)
IC55 P9
IC56 K11(#1)
IC56 N10(#2, 3)
IC57 L11(#1)
IC57 N11(#2, 3)
IC58 M11(#1)
IC58 N12(#2, 3)
IC59 M10(#2, 3)
IC59 N11(#1)
IC60 M11(#2, 3)
IC60 P11(#1)
IC61 M12(#2, 3)
IC61 Q11(#1)
IC62 Q9
IC63 K10(#1)
IC63 Q10(#2, 3)
IC64 L10(#1)
IC64 Q11(#2, 3)
IC65 M10(#1)
IC65 Q12(#2, 3)
IC66 N10(#1)
IC66 P10(#2, 3)
IC67 P10(#1)
IC67 P11(#2, 3)
IC68 P12(#2, 3)
IC68 Q10(#1)
IC69 D11
IC70 C10
IC71 D9
IC72 C11
IC73 D11
IC74 A9 (#1, 2)
IC75 C8 (#1, 2)
IC76 B8 (#1, 2)
IC77 C9
IC78 E7
IC79 A10
IC80 B9
IC81 A11
IC82 B10
IC83 C7
IC84 B11
IC85 B12
IC86 A12
IC87 D12
IC88 B5
IC89 G7
IC90 E9
IS12 C4
L1 Q4
L2 Q3
L3 P4
L4 Q1
L5 K2
L6 H2
L7 M3
L8 J3
L9 M4
L10 K4
L12 F2
L14 E3
L16 F4
L17 E6
L18 C6
*B4 E11
L20 E11
L21 H7 (#1)
L21 J8 (#2, 3)
L22 E7
L23 F9
L24 F11
L25 G11
L26 H10
L27 F12
L28 G11
L29 H11
L30 A9
L31 L10(#2, 3)
L31 N9 (#1)
L32 L9 (#1)
L32 N9 (#2, 3)
L33 C11
L34 A10
L35 A11
L36 B10
L37 A12
L38 B12
*D12
L40 B12
L41 A2
Q1 N1
Q2 P1
Q3 N1
Q4 N1
Q5 M1
Q6 P4
Q7 *N3
Q8 P2
Q9 N1
Q10 N1
Q11 N1
Q12 N2
Q13 *J4
Q14 *J3
Q15 *J3
Q16 *L1
Q17 *J2
Q18 *J1
Q19 L1
Q20 J1
Q23 *E1
Q25 E1
Q26 B7
Q27 B7
Q28 B7
Q29 A7
Q30 A5
Q31 P6
Q32 F12
Q33 F12
Q34 G12
Q35 A12
Q36 *L2 (#2, 3)
R1 *Q1
R2 *Q3
R3 *Q1
R4 *Q1
R5 *N1
R6 *N1
R7 *P1
R8 *P1
R9 *P1
R10 *N1
R11 *N1
R12 *N1
R13 *N1
R14 *M1
R15 *M1
R16 *M1
R17 *P4
R18 *N1
R19 *N1
R20 *N2
R21 *N3
R22 *N1
R23 *N1
R24 *P3
R25 *N1
R26 *N1
R27 *P3
R28 *N3
R29 *N3
R30 *N2
R31 *P2
R32 *N2
R33 *P2
R34 *N2
R35 *N2
R37 *N2
R38 *N2
R39 *K4
R40 *K3
R41 *K3
R42 *K3
R43 *K3
R44 *N3
R45 *L4
R46 *L4
R47 L4
R48 K3 (#2, 3)
R48 L3 (#1)
R49 *L3
R50 *L3
R51 L4
R52 *L3
R53 *M3
R54 *M3
R55 K4
R56 *J3
R57 *J4
R58 *J4
R59 *J3
R60 *J3
R61 *J3
R62 *J2
R63 *K2 (#1)
R63 *K3 (#2, 3)
R64 *L1
R65 *J2
R66 *J2
R67 *J2
R68 *L2
R69 *L1
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R71 *J1
R72 *J2
R73 *J1
R74 *L4
R75 *K4
R79 *F3
R80 *F3
R81 *F3
R83 *F4
R85 *G4
R87 F4
R95 *G3
R96 *G3
R97 *F4
R98 *F4
R100 *E2
R103 *E1
R104 *E1
R106 *E1
R107 *H5 (#2, 3)
R107 *J5 (#1)
R108 *H5 (#2, 3)
R108 *K5 (#1)
R109 *G5 (#2, 3)
R109 *H5 (#1)
R110 *G5
R111 *A4
R112 *A4
R113 *A4
R114 *A4
R115 *A4
R116 *B7
R117 *B7
R118 *B6
R119 *B6
R120 *B7
R121 *C7
R122 *B6
R123 *C7
R124 *A7
R125 *A3
R126 *A3
R127 *B4
R128 *B3
R129 *B3
R130 *B3
R131 *B3
R132 *C2
R133 *C2
R134 *D6
R135 *F5
R136 *F5
R137 *F5
R138 *F6
R139 E6 (#2, 3)
R139 F6 (#1)
R140 G6
R141 F6 (#2, 3)
R141 *G6 (#1)
R142 *G6
R143 G6
R144 G6 (#2, 3)
R144 H6 (#1)
R145 E6 (#2, 3)
R145 F6 (#1)
R146 F6
R147 F6
R148 F6
R149 F6
R150 F6
R151 F6
R152 F6
R153 Q7
R154 Q6
R155 Q7
R156 Q6
R157 Q7
R158 Q7
R159 K7 (#2, 3)
R159 K8 (#1)
R160 Q6
R161 Q6
R162 *P7
R163 *Q7
R166 *P7
R167 *Q8
R168 *P8
R169 Q6
R170 *P8
R171 *P8
R172 P6
R173 *P6
R174 *P6
R175 P6
R176 *P6
R177 *P6
R178 E11
R179 *G6
R180 E10
R181 *P9
R182 *E9
R183 *E9
R184 *K8 (#2, 3)
R184 *K9 (#1)
R185 *K8 (#2, 3)
R185 *K9 (#1)
R186 *D7 (#2, 3)
R190 E11
R191 E11
R192 *L2 (#2, 3)
R193 *L2 (#2, 3)
R194 *L2 (#2, 3)
R195 L3 (#2, 3)
R196 *L12(#2, 3)
R197 *N2 (#2, 3)
R198 *M1 (#2, 3)
R202 *F12
R203 *F12
R204 *F11
R205 *G11
R206 *H10
R207 *F12
R208 *F12
R209 *G11
R210 *H10
R211 *F12
R212 *F12
R213 *G11
R214 *H10
R215 *E12
R216 *F11
R217 *G11
R218 *G11
R219 *H11
R220 *H10
R221 *G12
R222 *J10
R223 *J9
R224 *K12
R225 *K11(#2, 3)
R225 *L12(#1)
R226 *K10(#2, 3)
R226 *M12(#1)
R227 *K12
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R228 *L12(#1)
R229 *K10(#2, 3)
R229 *M12(#1)
R230 *K12
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R234 *L12(#1)
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R237 *M12(#1)
R238 *K12
R239 *K11(#2, 3)
R239 *L12(#1)
R240 *K11(#2, 3)
R240 *M12(#1)
R241 *L9 (#2, 3)
R241 *M9 (#1)
R242 *L9 (#2, 3)
R242 *M9 (#1)
R243 *L9 (#2, 3)
R243 *M9 (#1)
R244 *L9
R245 *L9 (#2, 3)
R245 *M9 (#1)
R246 *L9 (#2, 3)
R246 *M9 (#1)
R247 *L9
R248 *L9 (#1)
R248 *M9 (#2, 3)
R249 K12
R250 K11(#2, 3)
R250 L12(#1)
R251 K10(#2, 3)
R251 M12(#1)
R252 *A8
R253 *K12(#2, 3)
R254 *K11(#3)
R255 *K11(#3)
R256 *K12
R257 *K12(#2, 3)
R257 *L12(#1)
R258 *K11(#2, 3)
R258 *M12(#1)
R259 *M9
R260 *M9
R261 *M9
R262 K12
R263 K11(#2, 3)
R263 L12(#1)
R264 K10(#2, 3)
R264 M12(#1)
R265 *M9
R266 *L12(#2, 3)
R266 *N12(#1)
R267 *L11(#2, 3)
R267 *Q12(#1)
R268 *L10(#2, 3)
R268 *Q12(#1)
R269 *L11(#2, 3)
R269 *N12(#1)
R270 *L12(#2, 3)
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R272 *L11(#2, 3)
R272 *P12(#1)
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R273 *P12(#1)
R274 *L10(#2, 3)
R274 *Q12(#1)
R275 *L10(#2, 3)
R275 *Q12(#1)
R276 *M9 (#2, 3)
R276 *N9 (#1)
R277 *L11(#2, 3)
R277 *P12(#1)
R278 *L10(#2, 3)
R278 *Q12(#1)
R279 *L12(#2, 3)
R279 *N12(#1)
R280 *L11(#2, 3)
R280 *P12(#1)
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R281 *Q12(#1)
R282 *L12(#2, 3)
R282 *N12(#1)
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R283 *P12(#1)
R284 *L10(#2, 3)
R284 *Q12(#1)
R285 *M12(#2, 3)
R285 *N12(#1)
R286 *M11(#2, 3)
R286 *P12(#1)
R287 *M10(#2, 3)
R287 *Q12(#1)
R288 *P9
R289 *P9
R290 M12(#2, 3)
R290 N12(#1)
R291 M11(#2, 3)
R291 P12(#1)
R292 M10(#2, 3)
R292 Q12(#1)
R293 *P9
R294 *P9
R295 *P9
R296 *P9
R297 *P9
R298 *P9
R299 N10(#2, 3)
R299 *K11(#1)
R300 N11(#2, 3)
R300 *L11(#1)
R301 N12(#2, 3)
R301 *M11(#1)
R302 *M10(#2, 3)
R302 *N11(#1)
R303 *M11(#2, 3)
R303 *P11(#1)
R304 *M12(#2, 3)
R304 *Q11(#1)
R305 N10(#2, 3)
R305 *K11(#1)
R306 N11(#2, 3)
R306 *L11(#1)
R307 N12(#2, 3)
R307 *M11(#1)
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R308 *N11(#1)
R309 *M12(#2, 3)
R309 *P11(#1)
R310 *M12(#2, 3)
R310 *Q11(#1)
R311 *Q9
R312 *K10(#1)
R312 *Q10(#2, 3)
R313 *L10(#1)
R313 *Q11(#2, 3)
R314 *M10(#1)
R314 *Q12(#2, 3)
R315 *N10(#1)
R315 *P11(#2, 3)
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R316 *P11(#2, 3)
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R319 *Q10(#2, 3)
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R320 *Q11(#2, 3)
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R321 *Q12(#2, 3)
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R322 *P10(#2, 3)
R323 *P10(#1)
R323 *P11(#2, 3)
R324 *P12(#2, 3)
R324 *Q10(#1)
R325 *Q9
R326 *Q9
R327 *K10(#1)
R327 *Q10(#2, 3)
R328 *K10(#1)
R328 *Q10(#2, 3)
R329 *L10(#1)
R329 *Q11(#2, 3)
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R330 *Q11(#2, 3)
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R332 *Q12(#2, 3)
R333 *N10(#1)
R333 *P10(#2, 3)
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R334 *P11(#2, 3)
R335 *P10(#1)
R335 *P11(#2, 3)
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R336 *P12(#2, 3)
R337 *P12(#2, 3)
R337 *Q10(#1)
R338 *P12(#2, 3)
R338 *Q10(#1)
R339 *Q9
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R340 *Q10(#2, 3)
R341 *L10(#1)
R341 *Q11(#2, 3)
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R343 *P10(#2, 3)
R344 *P10(#1)
R344 *P11(#2, 3)
R345 *P12(#2, 3)
R345 *Q10(#1)
R346 *Q9
R347 *K10(#1)
R347 *Q10(#2, 3)
R348 *L10(#1)
R348 *Q11(#2, 3)
R349 *M10(#1)
R349 *Q12(#2, 3)
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R350 *Q10(#2, 3)
R351 *P10(#1)
R351 *Q11(#2, 3)
R352 *Q10(#1)
R352 *Q12(#2, 3)
R353 Q9
R354 Q10(#2, 3)
R354 *K10(#1)
R355 Q11(#2, 3)
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R356 Q12(#2, 3)
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R358 P11(#2, 3)
R358 *P10(#1)
R359 P12(#2, 3)
R359 *Q10(#1)
R360 *Q9
R361 *Q9
R362 *Q9
R363 *Q10
R364 *Q10
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R365 *Q11(#2, 3)
R366 *Q11
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R369 *C8
R370 *E8
R371 *E8
R379 *C8
R380 *D8
R381 *D8
R386 *B12
R387 *B12
R388 *A12
R389 *A12
R390 *A12
R391 *B12
R392 *B12
R393 *A12
R394 *A12
R395 *A12
R396 *A12
R397 *D12
R398 *D12
R399 *D10
R409 *K12
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R410 *K12(#1)
R411 *K10(#2, 3)
R411 *L12(#1)
R412 *Q4
R413 *Q4
R414 *Q4
R415 *Q4
R416 *B4
R417 *C9
R418 *A3
R419 *B8
R420 *F4
R421 *F4
R422 *G4
R424 *Q4
R489 *E5
R490 *E5
RB1 E5
RB2 E5
RB3 H5 (#2, 3)
RB3 K5 (#1)
RB4 E5
RB5 B5
RB6 A8
RB7 C5
RB8 F10
RB9 F10
RB10 F10
RB11 G10
RB12 G10
RB13 G10
RB14 H9
RB15 H9
RB16 H9
RS1 A6
RS2 A5
RS3 A8
RS4 A5
RS5 A6
RS6 A6
RS7 A7
RS8 A4
RS9 A8
RS10 E12
RS11 E12
RS12 E12
RS13 E12
RS14 *G7
RS15 *F6
RS16 *F7
RS17 *F7
RS23 *E7
RS25 *E7
RS27 *E7
RS29 *E7 (#3)
RS30 *D7 (#1,2)
RV1 E12
RV2 G11
RV3 H11
RV4 A9
RV5 M9
RV6 L12(#2, 3)
RV6 P12(#1)
RV7 L11(#2, 3)
RV7 N12(#1)
RV8 L11(#2, 3)
RV8 Q12(#1)
RV9 L11(#2, 3)
RV9 Q12(#1)
RV10 M12(#2, 3)
RV10 N12(#1)
RV11 M11(#2, 3)
RV11 P12(#1)
RV12 M11(#2, 3)
RV12 Q12(#1)
RV14 Q9
RV15 K10(#1)
RV15 Q10(#2, 3)
RV16 L10(#1)
RV16 Q11(#2, 3)
RV17 M10(#1)
RV17 Q11(#2, 3)
RV18 N10(#1)
RV18 P10(#2, 3)
RV19 P10(#1)
RV19 P11(#2, 3)
RV20 P12(#2, 3)
RV20 Q10(#1)
TP1 A1
TP5 H5
TP6 F5
TP7 K8
TP8 K5
TP9 K6
TP10 K12(#2, 3)
TP10 L11(#1)
TP11 K11(#2, 3)
TP11 M11(#1)
TP12 K10(#2, 3)
TP12 N11(#1)
TP13 M12(#2, 3)
TP13 P11(#1)
TP14 M11(#2, 3)
TP14 Q11(#1)
TP15 M10(#2, 3)
TP15 Q11(#1)
TP16 Q9
TP17 K10(#1)
TP17 Q10(#2, 3)
TP18 L10(#1)
TP18 Q11(#2, 3)
TP19 M10(#1)
TP19 Q11(#2, 3)
TP20 N10(#1)
TP20 Q10(#2, 3)
TP21 P10(#1)
TP21 Q11(#2, 3)
TP22 Q10(#1)
TP22 Q12(#2, 3)
X1 A4
X2 C12

NOTE
* : B SIDE
#1: SUFFIX -11
#2: SUFFIX -12
#3: SUFFIX -13

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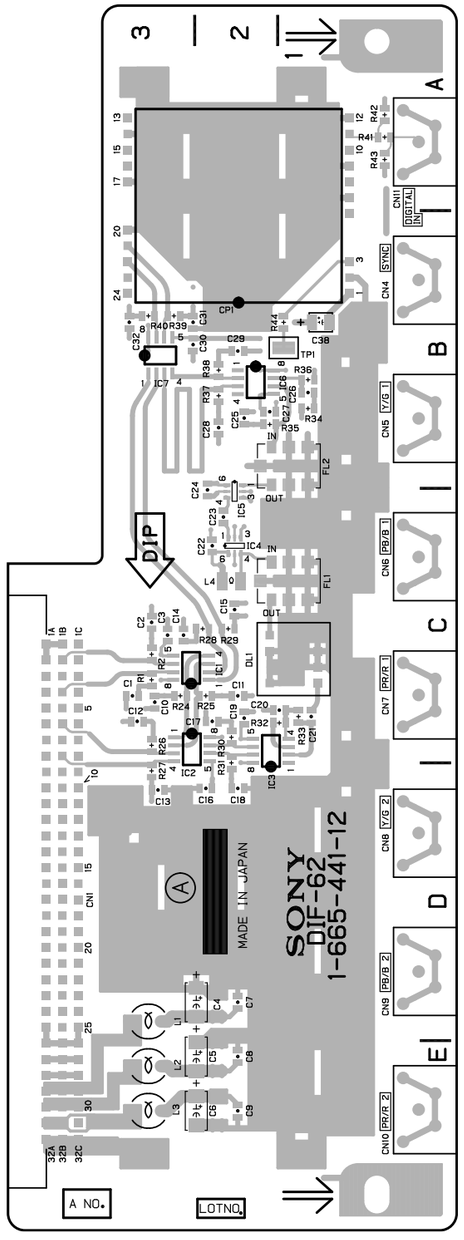
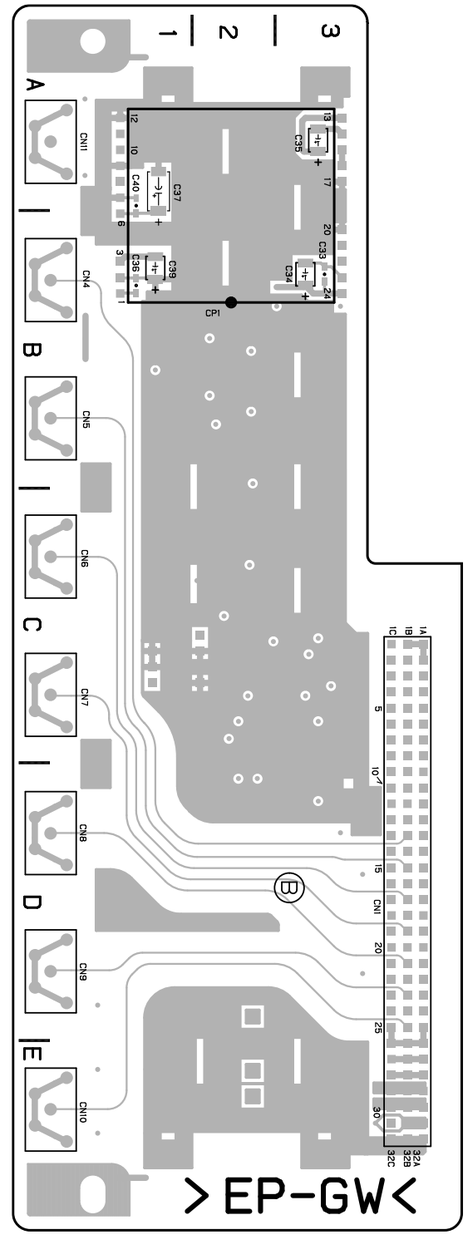
C1	C3	R37	B2
C2	C3	R38	B2
C3	C3	R39	B3
C4	D2	R40	B3
C5	E2	R41	A1
C6	E2	R42	A1
C7	D2	R43	A1
C8	E2	R44	B1
C9	E2		
C10	C3	TP1	B1
C11	C2		
C12	C3	*:B SIDE	
C13	D3		
C14	C3		
C15	C2		
C16	D2		
C17	C2		
C18	D2		
C19	C2		
C20	C1		
C21	C1		
C22	C2		
C23	C2		
C24	C2		
C25	B2		
C26	B1		
C27	B2		
C28	B2		
C29	B2		
C30	B3		
C31	B3		
C32	B3		
C33	*B3		
C34	*B3		
C35	*A3		
C36	*B1		
C37	*A1		
C38	B1		
C39	*B1		
C40	*A1		
CN1	D3		
CN4	B1		
CN5	B1		
CN6	C1		
CN7	C1		
CN8	D1		
CN9	D1		
CN10	E1		
CN11	A1		
CP1	B1		
DL1	C1		
FL1	C1		
FL2	B1		
IC1	C2		
IC2	C3		
IC3	C1		
IC4	C2		
IC5	C2		
IC6	B2		
IC7	B3		
L1	D3		
L2	E3		
L3	E3		
L4	C2		
R1	C3		
R2	C3		
R24	C3		
R25	C2		
R26	C3		
R27	D3		
R28	C2		
R29	C2		
R30	C2		
R31	C2		
R32	C1		
R33	C1		
R34	B1		
R35	B2		
R36	B1		



HKPF-102 (UCJ) :
S/N 11001 and Higher
HKPF-102 (J) :
S/N 30101 and Higher

DIF-62 -A SIDE-
1-665-441-12

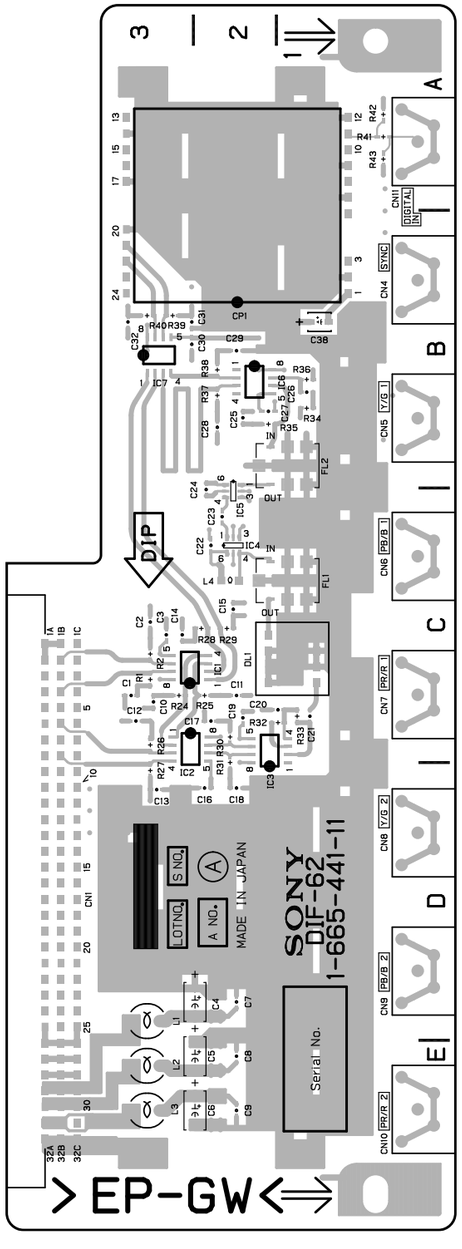


DIF-62 -B SIDE-
1-665-441-12

DIF-62(1-665-441-11)

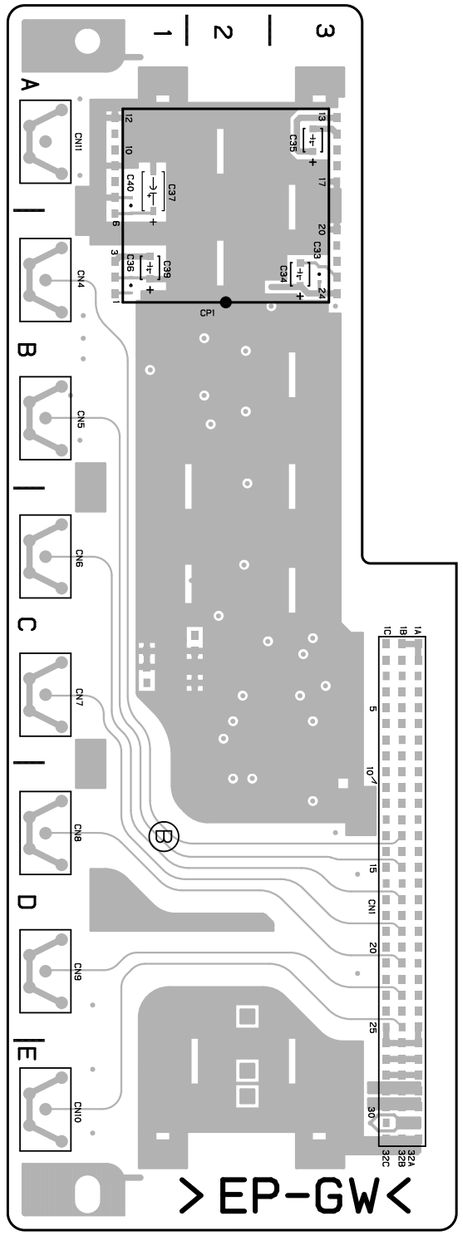
C1	C3
C2	C3
C3	C3
C4	D2
C5	E2
C6	E2
C7	D2
C8	E2
C9	E2
C10	C3
C11	C2
C12	C3
C13	D3
C14	C3
C15	C2
C16	D2
C17	C2
C18	D2
C19	C2
C20	C1
C21	C1
C22	C2
C23	C2
C24	C2
C25	B2
C26	B1
C27	B2
C28	B2
C29	B2
C30	B3
C31	B3
C32	B3
C33	*B3
C34	*B3
C35	*A3
C36	*B1
C37	*A1
C38	B1
C39	*B1
C40	*A1
CN1	D3
CN4	B1
CN5	B1
CN6	C1
CN7	C1
CN8	D1
CN9	D1
CN10	E1
CN11	A1
CP1	B1
DL1	C1
FL1	C1
FL2	B1
IC1	C2
IC2	C3
IC3	C1
IC4	C2
IC5	C2
IC6	B2
IC7	B3
L1	D3
L2	E3
L3	E3
L4	C2
R1	C3
R2	C3
R24	C3
R25	C2
R26	C3
R27	D3
R28	C2
R29	C2
R30	C2
R31	C2
R32	C1
R33	C1
R34	B1
R35	B2
R36	B1
R37	B2
R38	B2
R39	B3
R40	B3
R41	A1
R42	A1
R43	A1

*:B SIDE



HKPF-102 (J) :
S/N 30001 through 30100

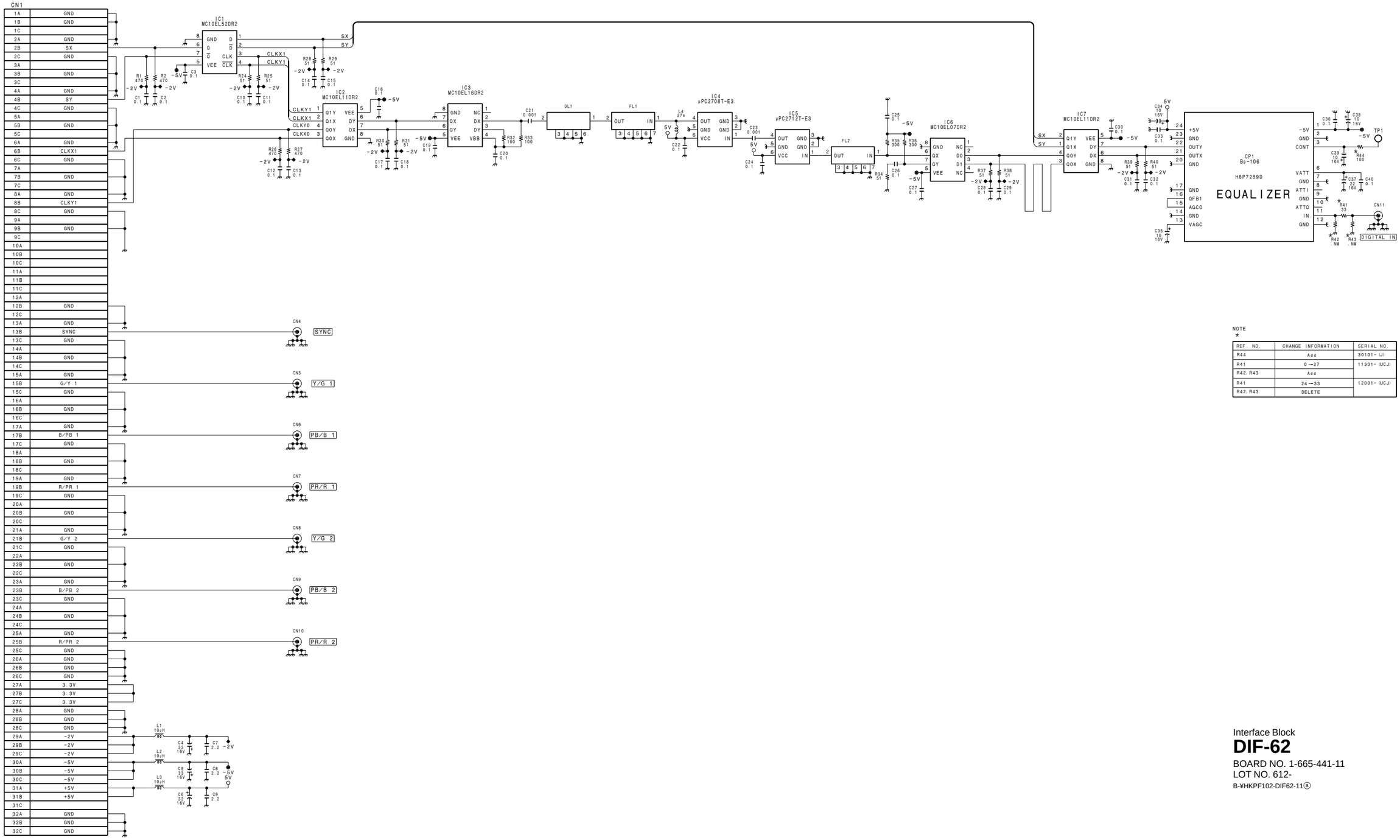
DIF-62 -A SIDE-
1-665-441-11



DIF-62 -B SIDE-
1-665-441-11

Section 8
Schematic Diagrams

HKPF-102 (UCJ) :
HKPF-102 (J) :

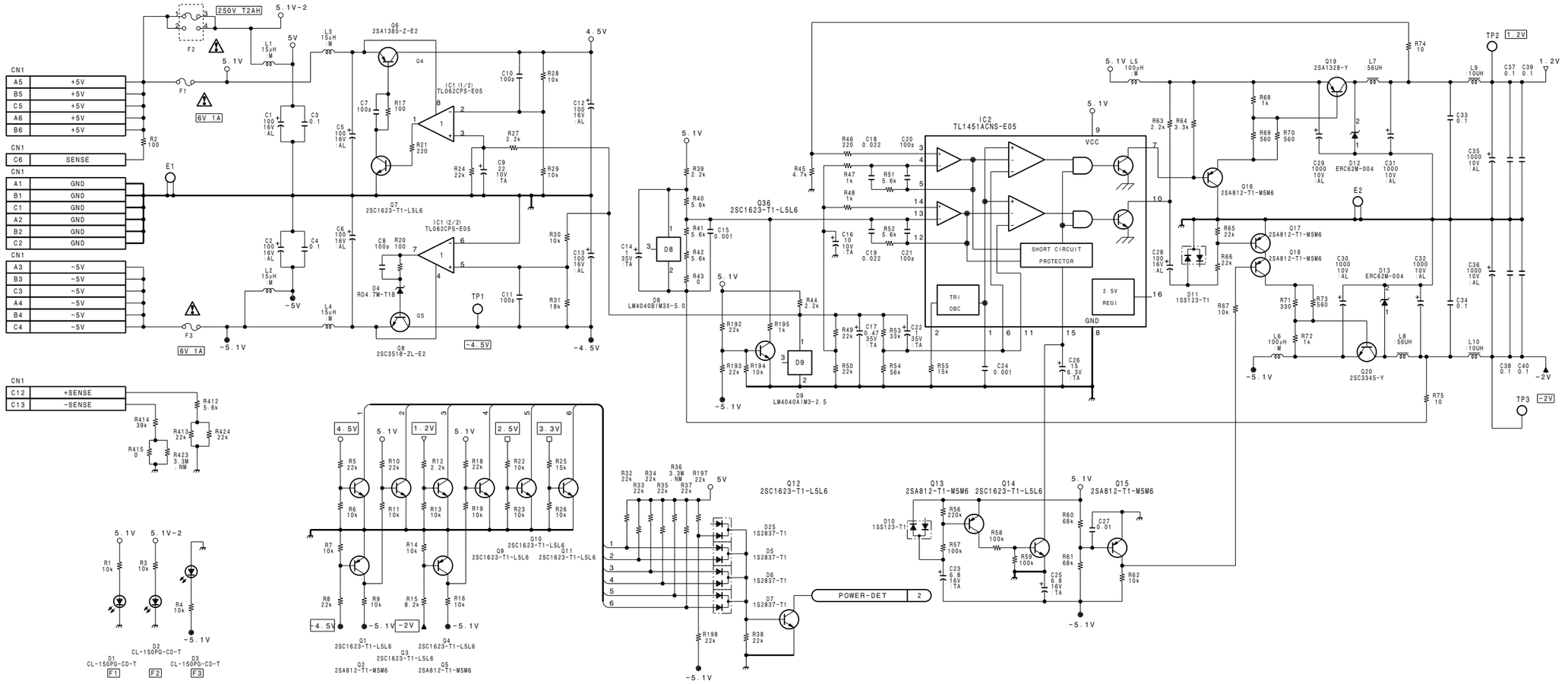


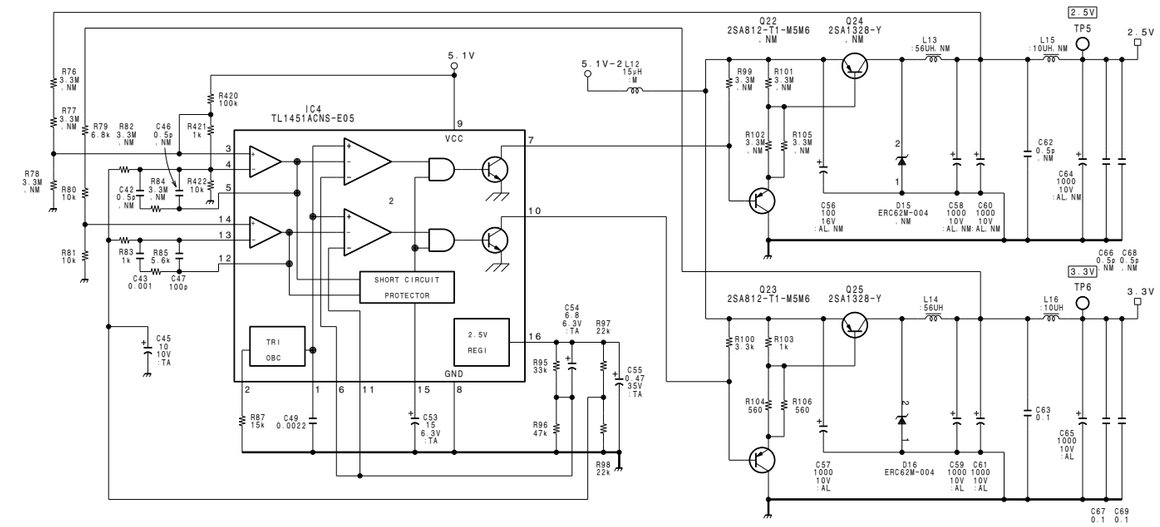
NOTE
*

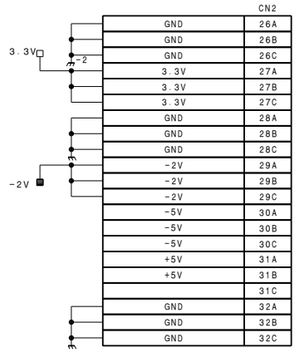
REF. NO.	CHANGE INFORMATION	SERIAL NO.
R44	Add	30101- (J)
R41	0 → 27	11301- (UCJ)
R42. R43	Add	
R41	24 → 33	12001- (UCJ)
R42. R43	DELETE	

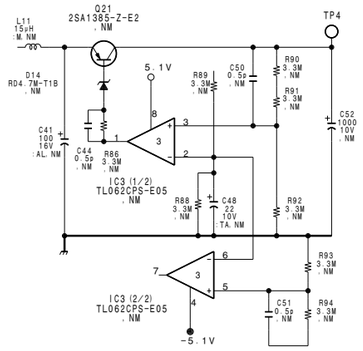
Interface Block
DIF-62
BOARD NO. 1-665-441-11
LOT NO. 612-
B-¥HKPF102-DIF62-11ⓐ

HKPF-102 (UCJ) : S/N 11101 and Higher









Power Block

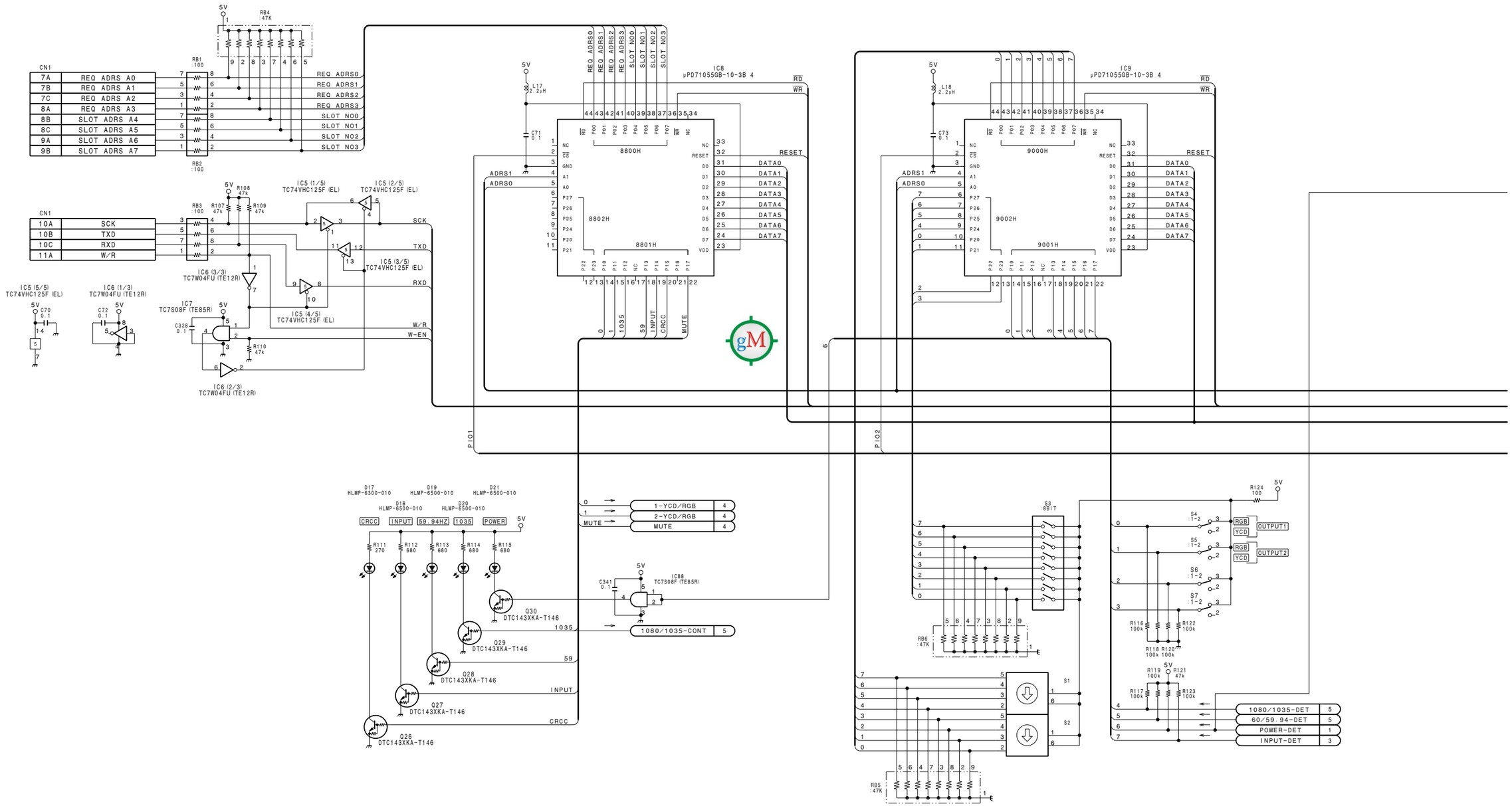
DA-126 (1/5)

BOARD NO. 1-665-440-14
LOT NO. 711-

B-¥HKPF102-DA126-14ⓐ

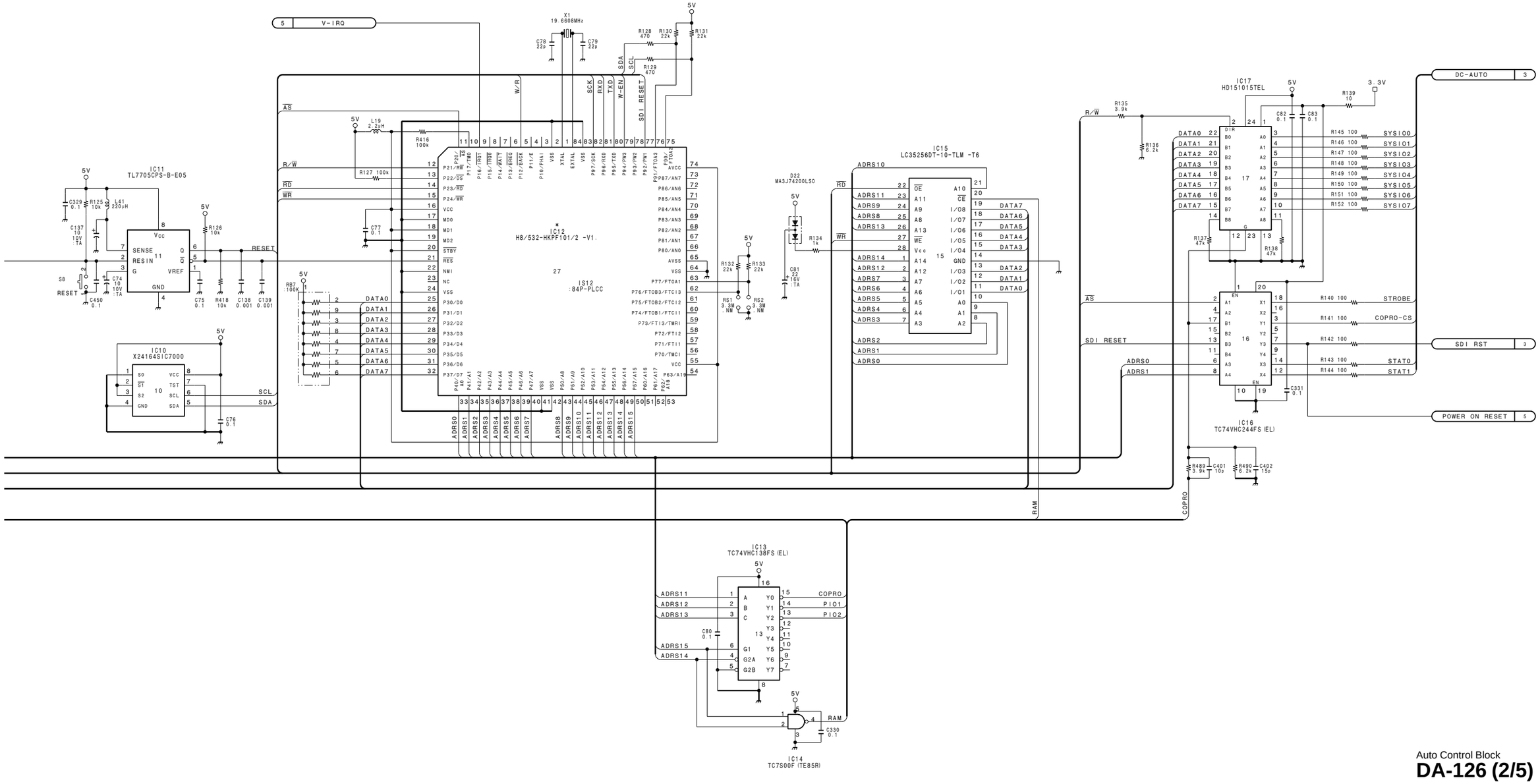
DA-126 (2/5)

HKPF-102 (UCJ) : S/N 11101 and Higher



8-4 (b)

DA-126 (2/5)



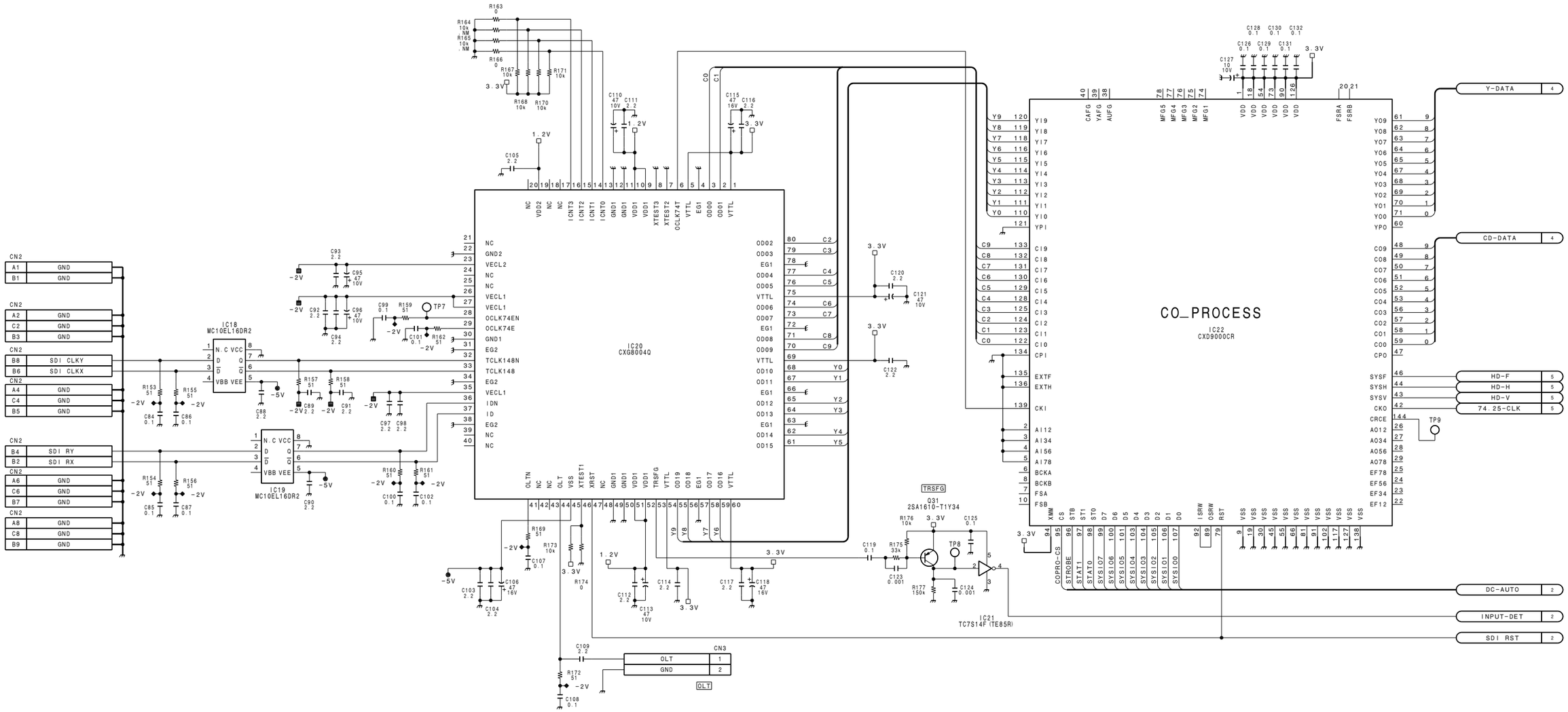
Auto Control Block
DA-126 (2/5)
BOARD NO. 1-665-440-14
LOT NO. 711-
B-¥HKPF102-DA126-14Ⓐ

HKPF-102

8-5 (b) 8-5 (b)

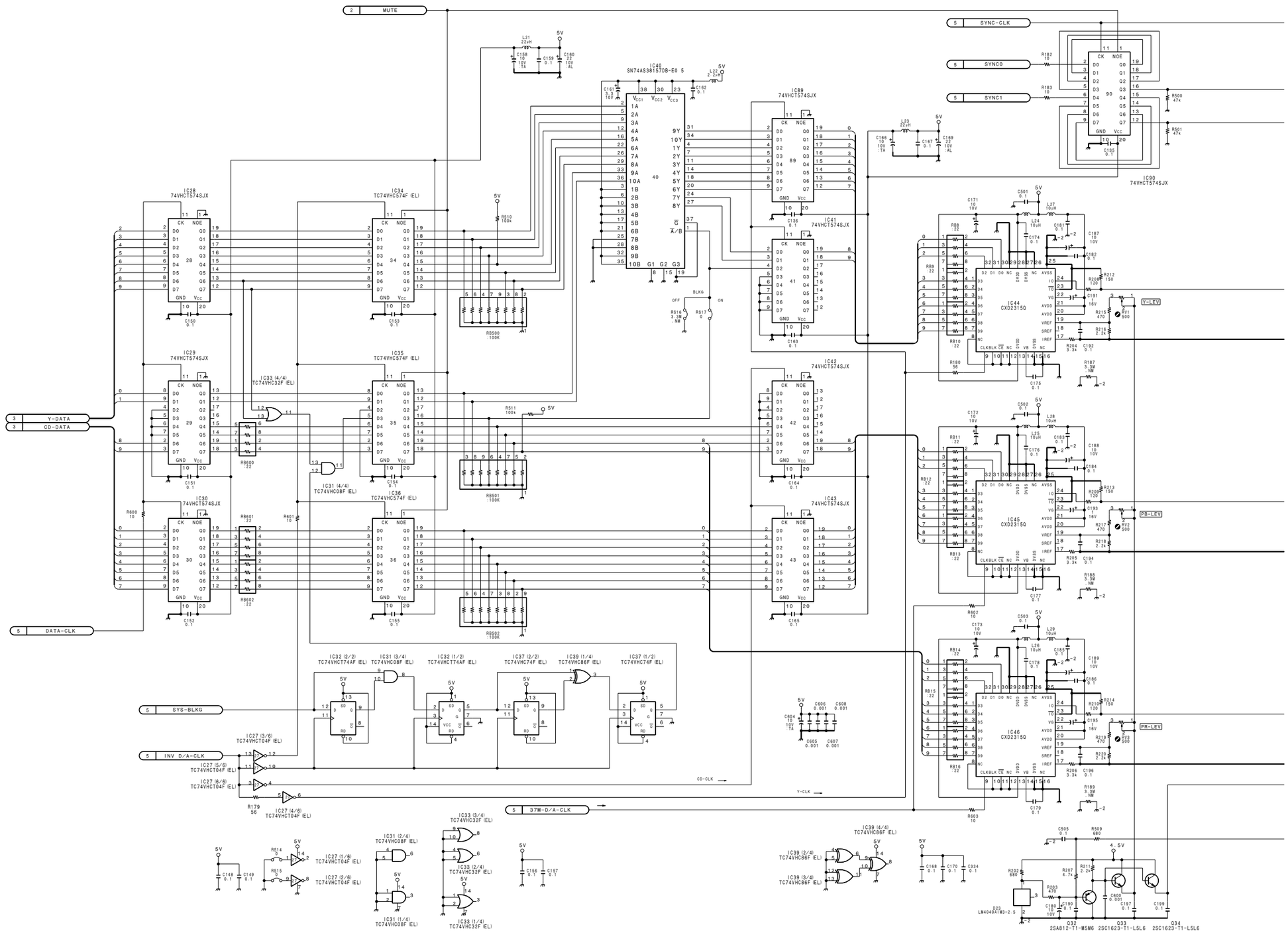
I J K L M N O P

HKPF-102 (UCJ) : S/N 11101 and Higher



1.5 GHz Processing Block
DA-126 (3/5)
BOARD NO. 1-665-440-14
LOT NO. 711-
B-¥HKPF102-DA126-14Ⓐ

HKPF-102 (UCJ) : S/N 11101 and Higher



8-8 (b) 8-8 (b)

HKPF-102

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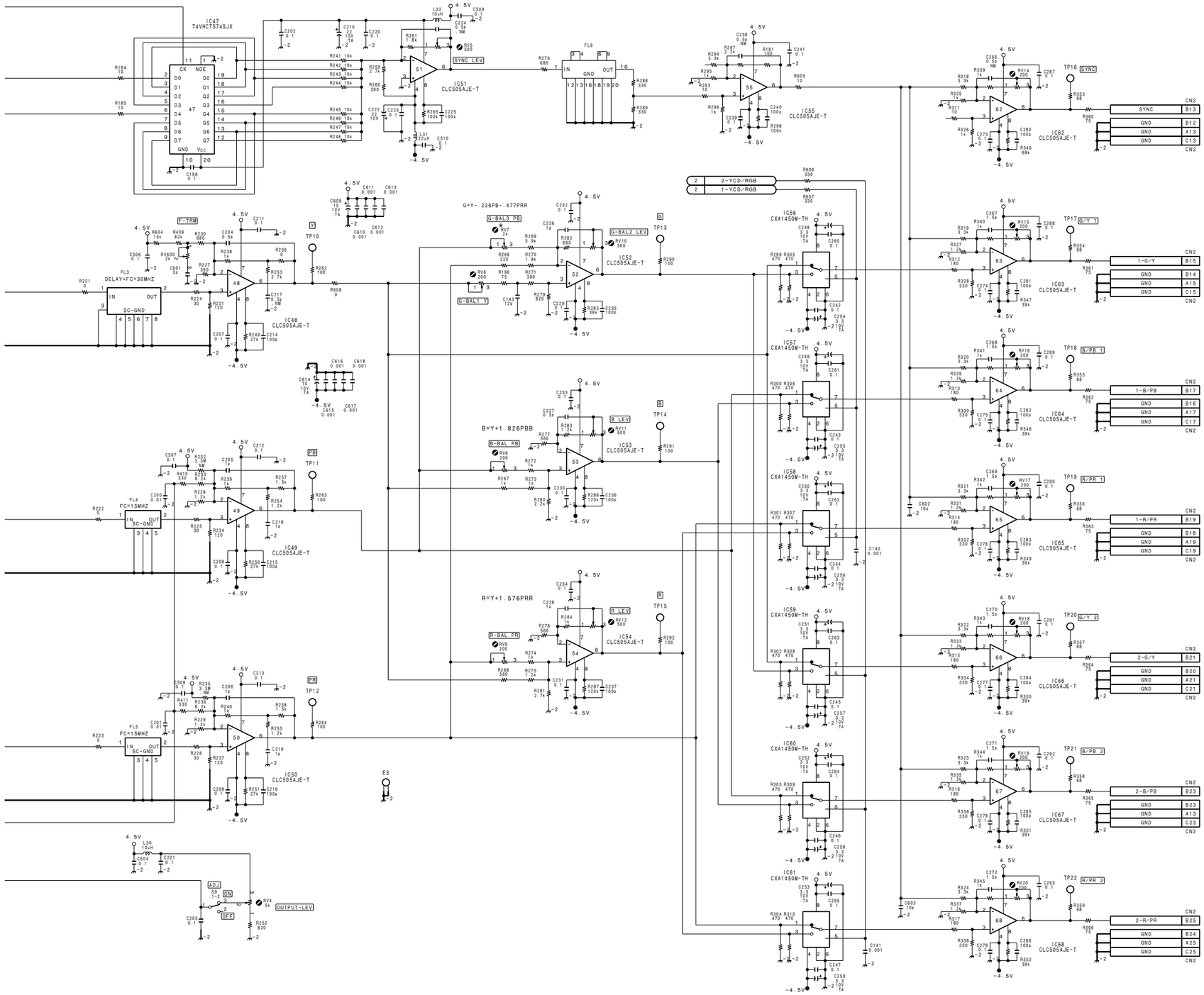
DA-126 (4/5)



NOTE
*

REF. NO.	CHANGE INFORMATION	SERIAL NO.
RV7	500 → 2k	12001- (UCJ)

Video Processing Block

DA-126 (4/5)

BOARD NO. 1-665-440-14
LOT NO. 711-
B-ΨHKPF102-DA126-14ⓐ

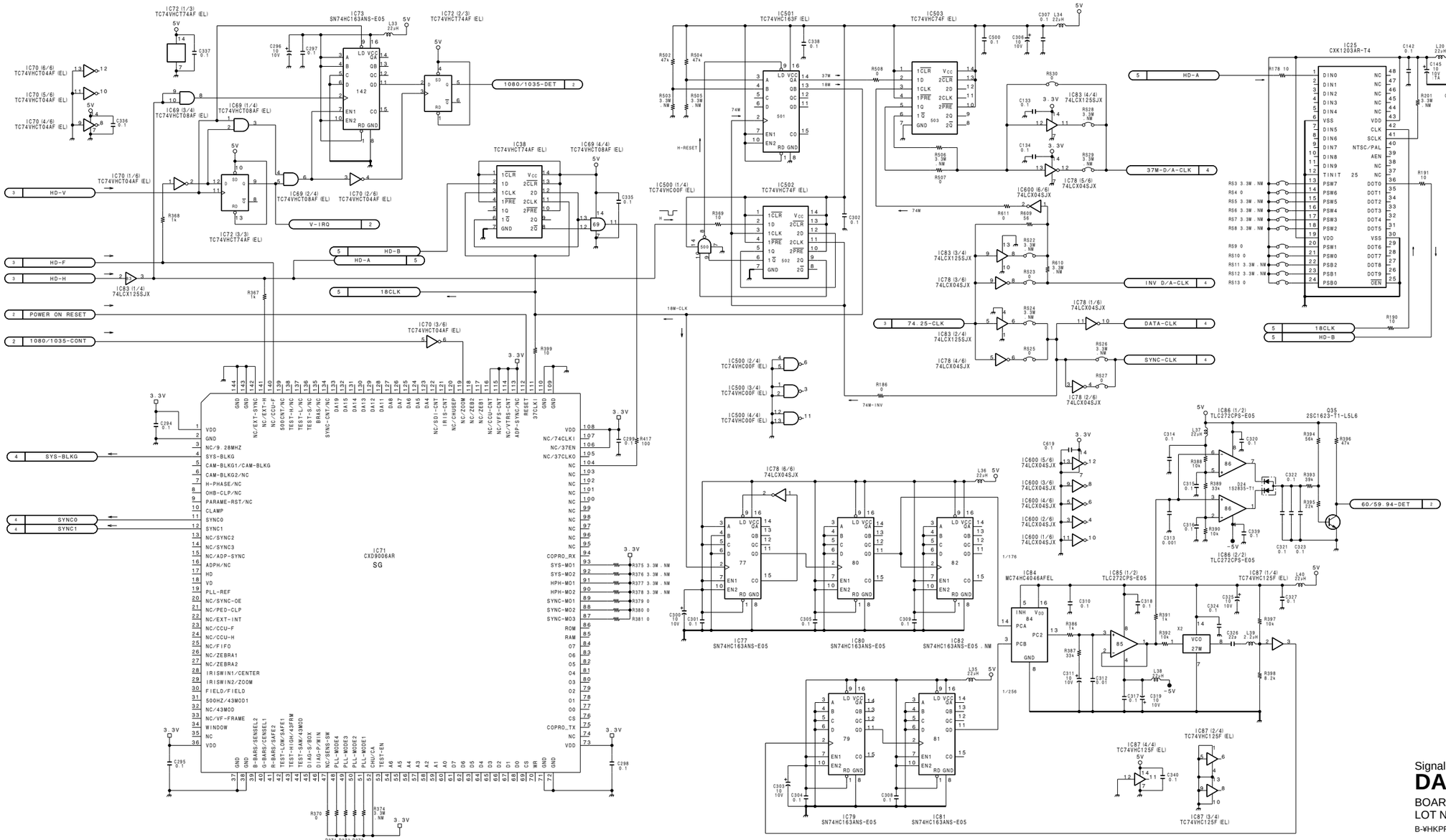
HKPF-102

8-9 (b)

8-9 (b)

I J K L M N O P

HKPF-102 (UCJ) : S/N 11101 and Higher

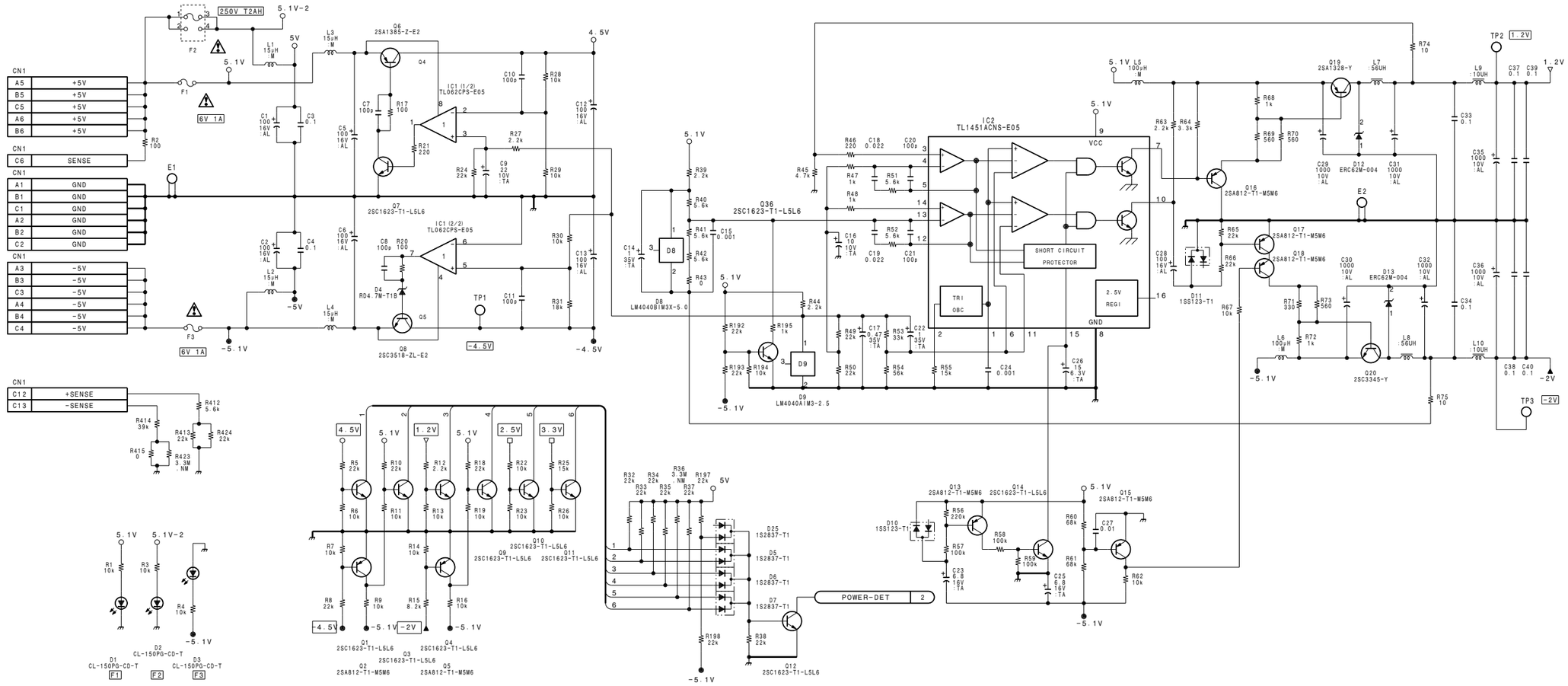


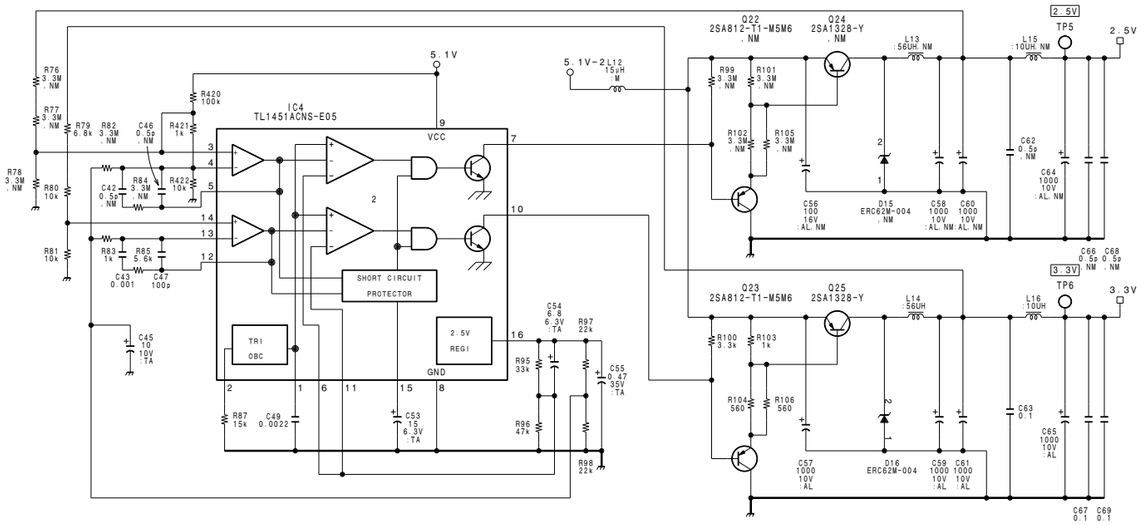
Signal Generator Block

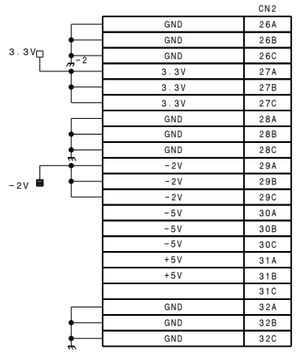
DA-126 (5/5)

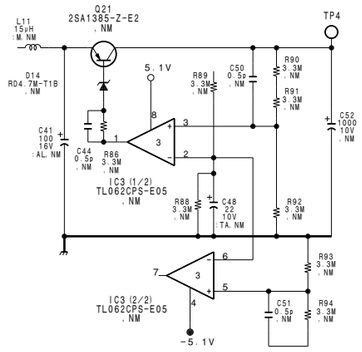
BOARD NO. 1-665-440-14
LOT NO. 711-
B-¥HKPF102-DA126-14Ⓐ

HKPF-102 (UCJ) : S/N 11001 through 11100
HKPF-102 (J) : S/N 30301 and Higher









Power Block

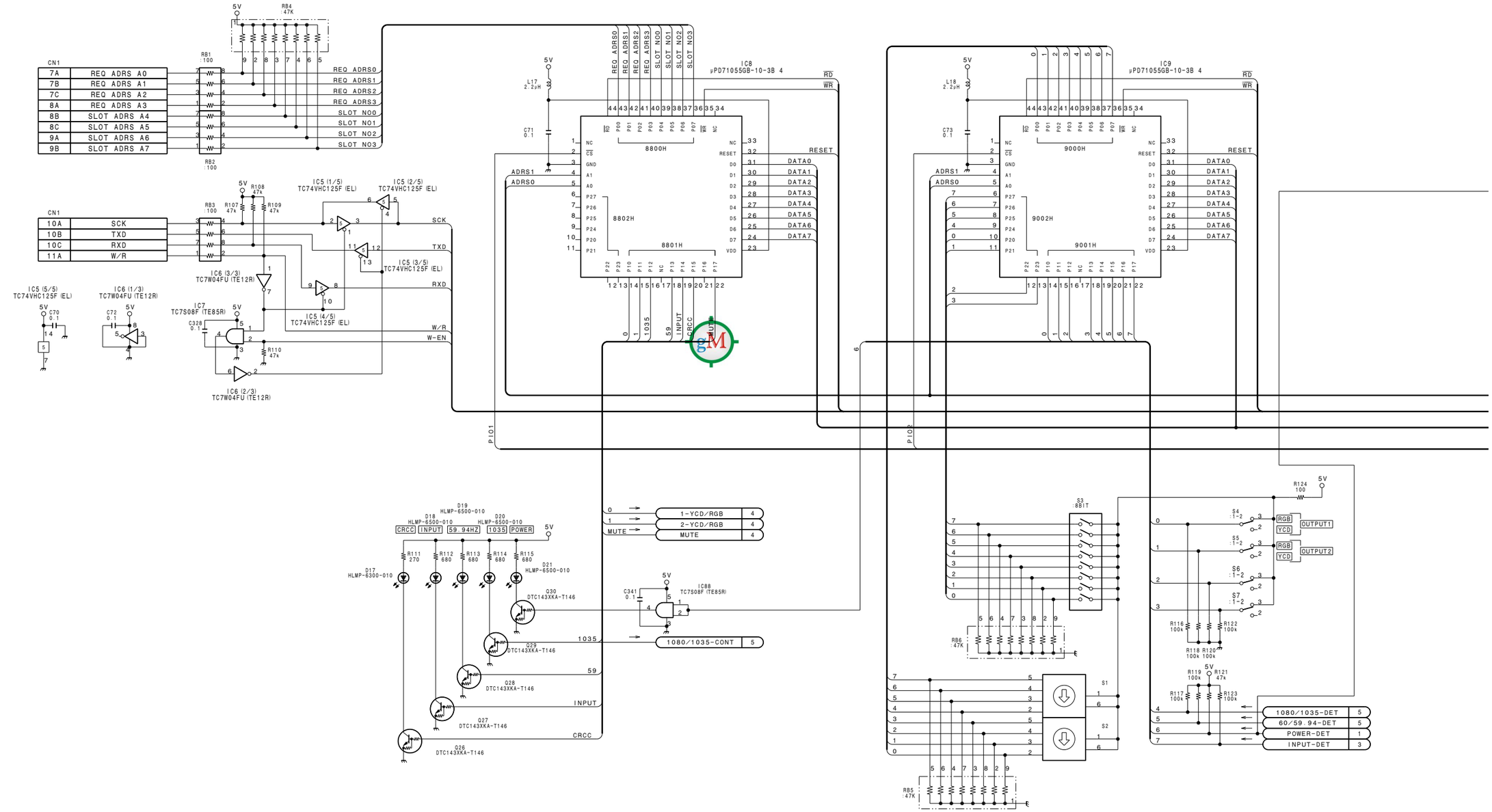
DA-126 (1/5)

BOARD NO. 1-665-440-13
LOT NO. 707-

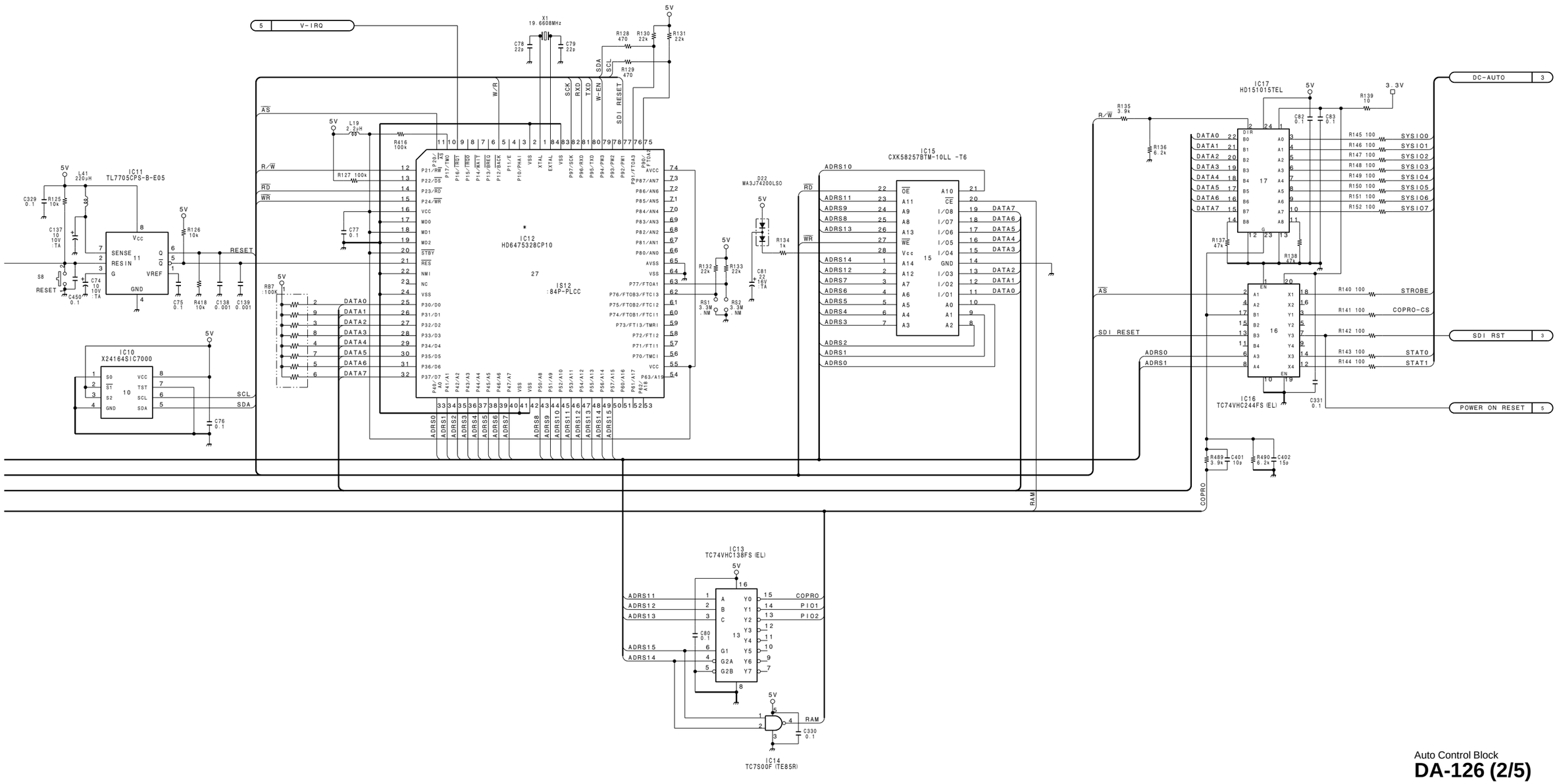
B-¥HKPF102-DA126-13ⓐ

DA-126 (2/5)

HKPF-102 (UCJ) : S/N 11001 through 11100
HKPF-102 (J) : S/N 30301 and Higher



8-4 (a)



Auto Control Block

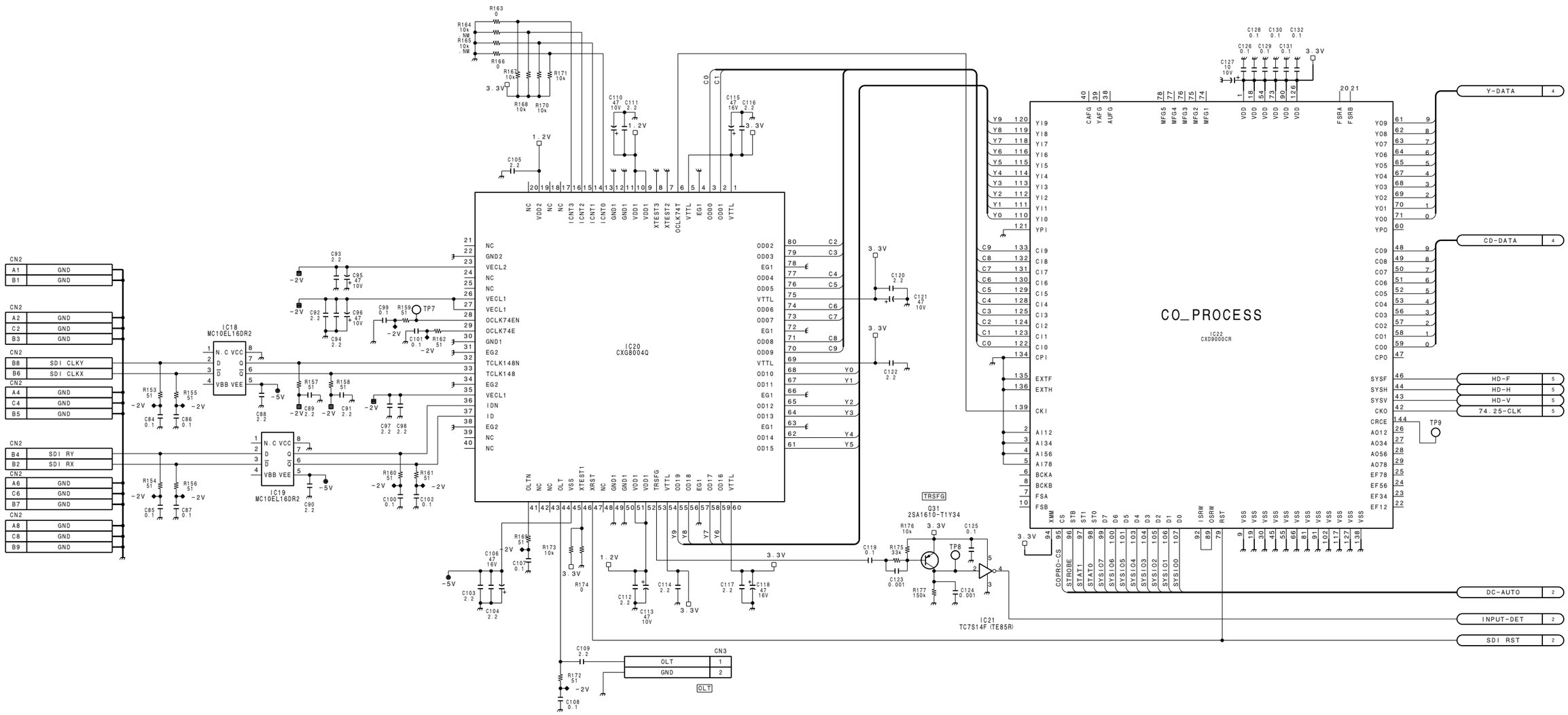
DA-126 (2/5)

BOARD NO. 1-665-440-13
LOT NO. 707-
B-¥HKPF102-DA126-13ⓐ

HKPF-102

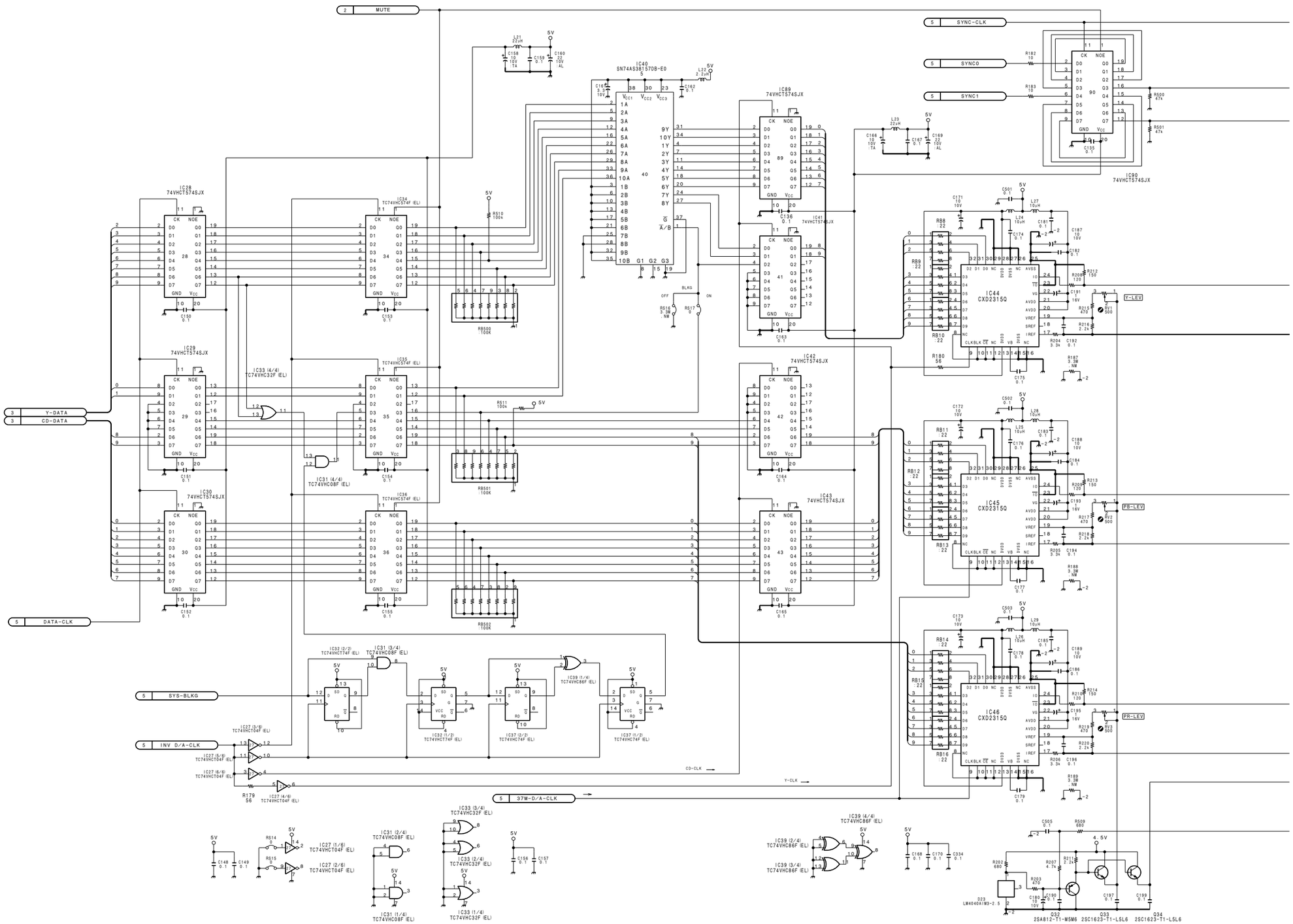
8-5 (a) 8-5 (a)

HKPF-102 (UCJ) : S/N 11001 through 11100
HKPF-102 (J) : S/N 30301 and Higher



1.5 GHz Processing Block
DA-126 (3/5)
BOARD NO. 1-665-440-13
LOT NO. 707-
B-¥HKPF102-DA126-13④

HKPF-102 (UCJ) : S/N 11001 through 11100
HKPF-102 (J) : S/N 30301 and Higher



8-8 (a) 8-8 (a)

HKPF-102

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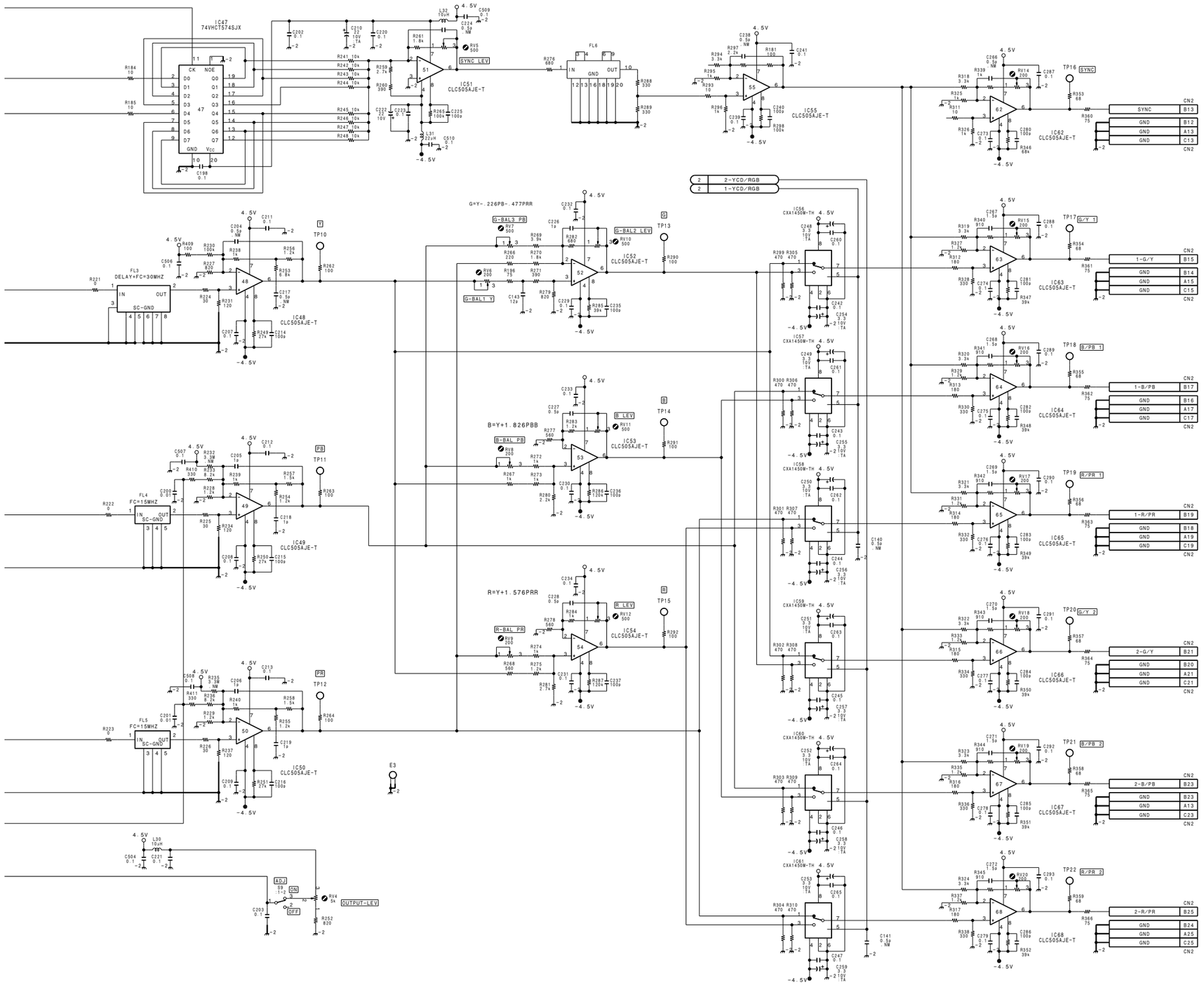


Video Processing Block

DA-126 (4/5)

BOARD NO. 1-665-440-13
LOT NO. 707-

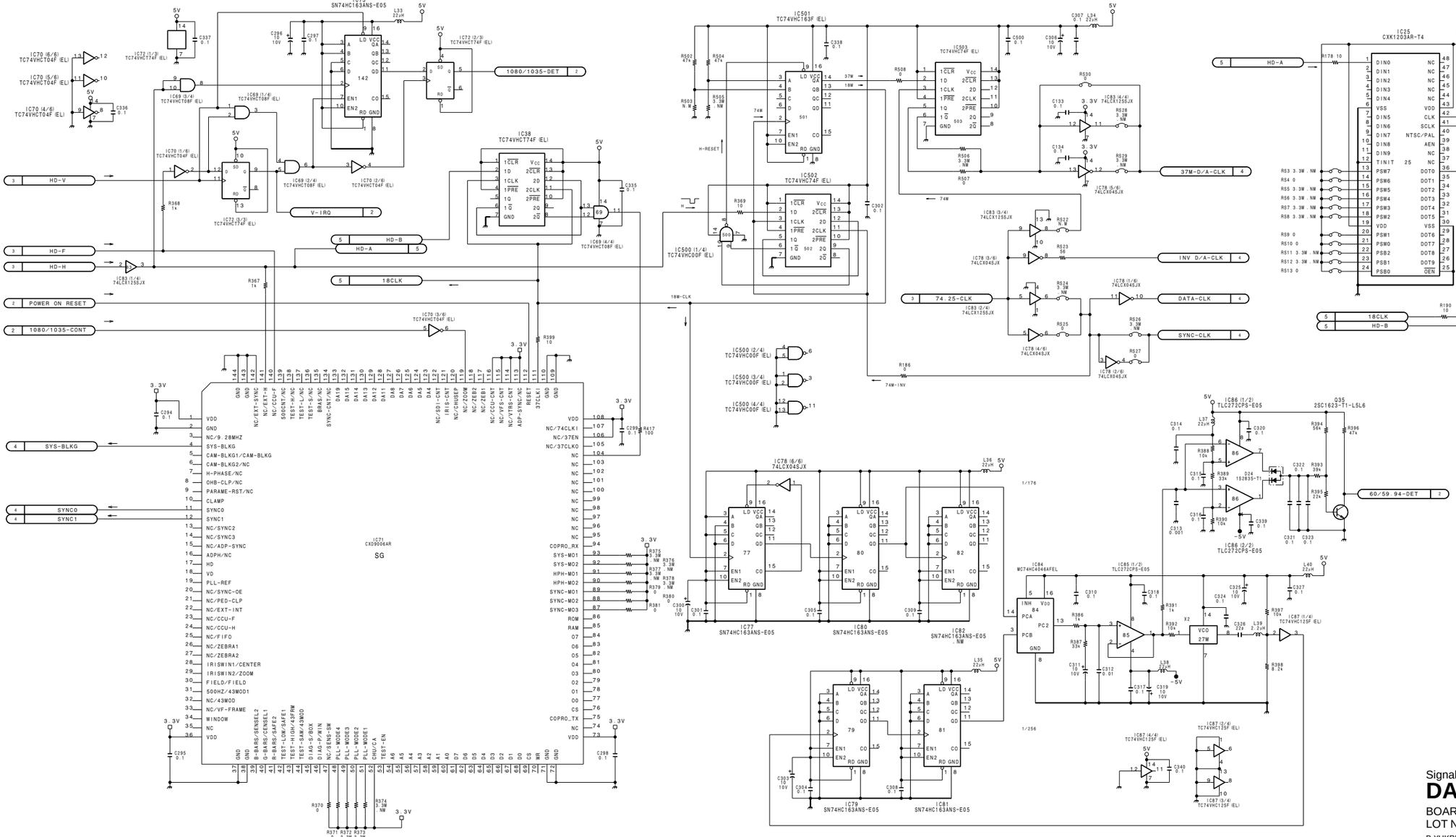
B-MHKPF102-DA126-13ⓐ

HKPF-102

8-9 (a)

8-9 (a)

HKPF-102 (UCJ) : S/N 11001 through 11100
HKPF-102 (J) : S/N 30301 and Higher



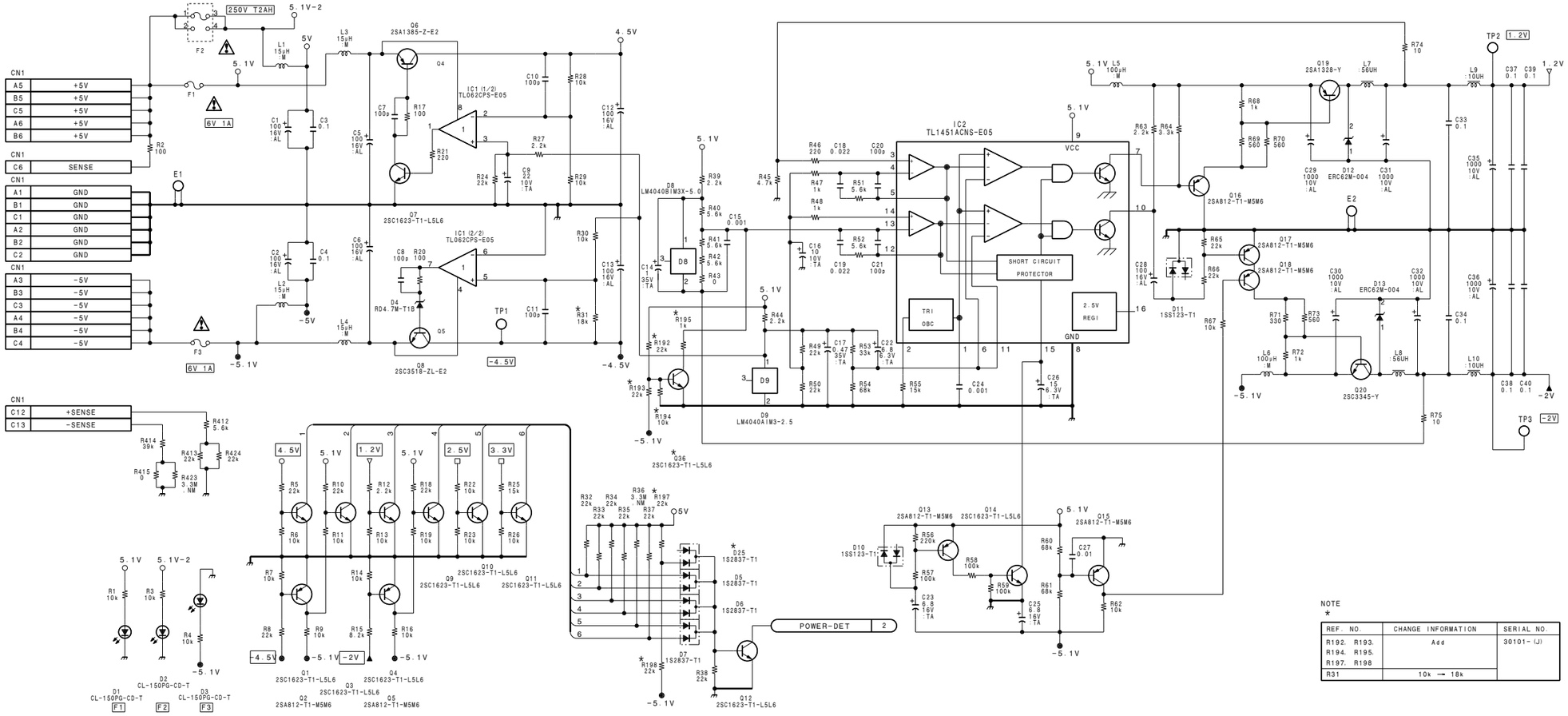
Signal Generator Block

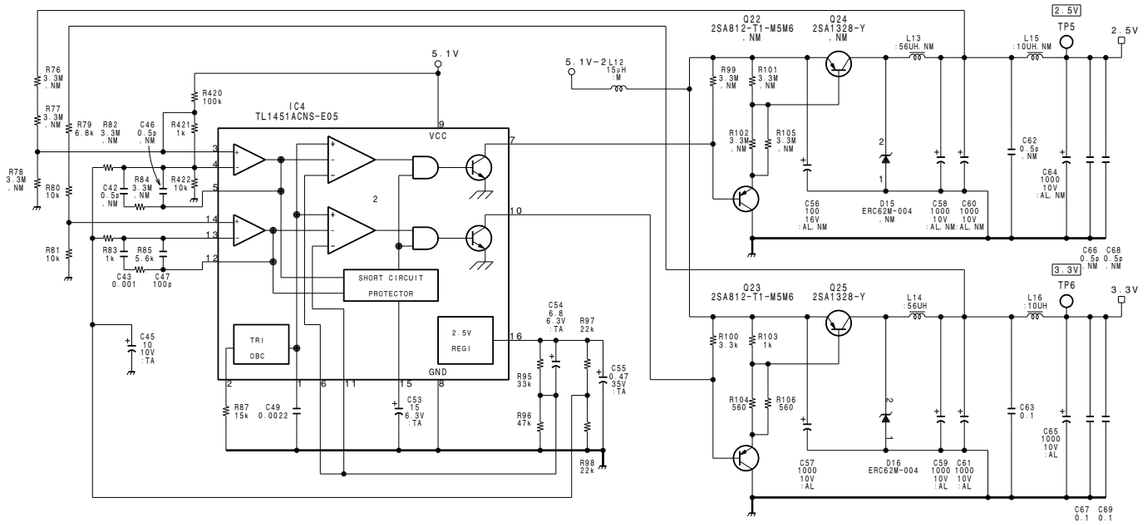
DA-126 (5/5)

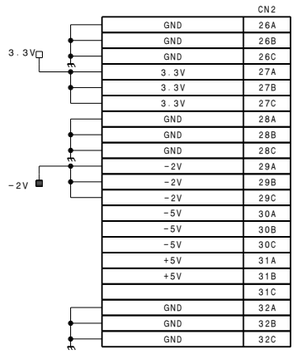
BOARD NO. 1-665-440-13
LOT NO. 707-

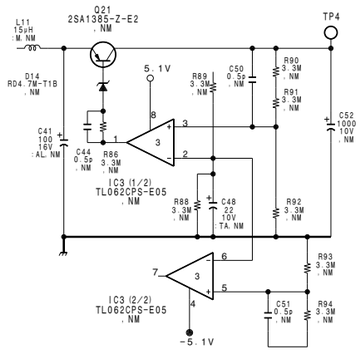
B-¥HKPF102-DA126-13ⓐ

HKPF-102 (J) : S/N 30001 through 30300









Power Block

DA-126 (1/5)

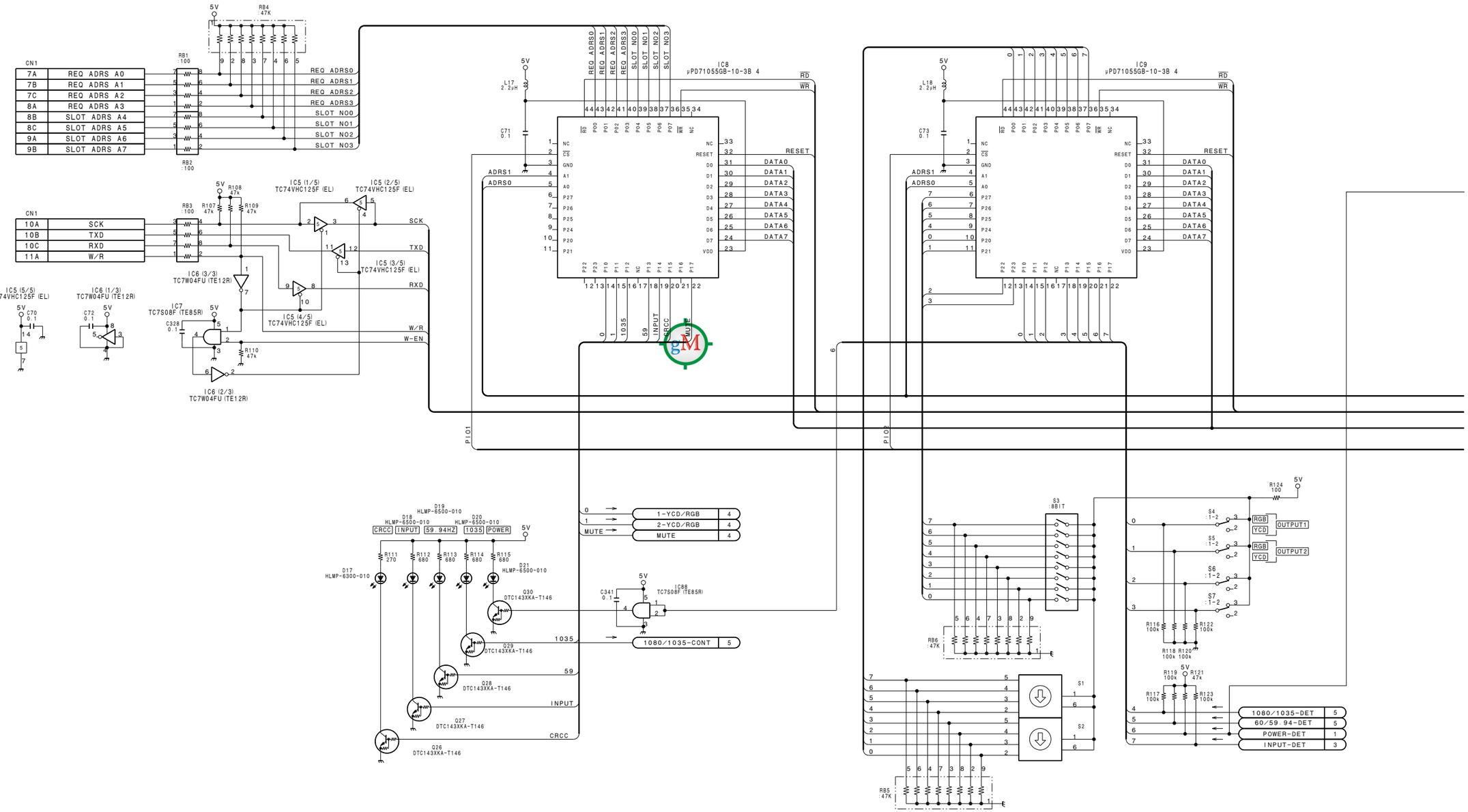
BOARD NO. 1-665-440-11

LOT NO. 612-

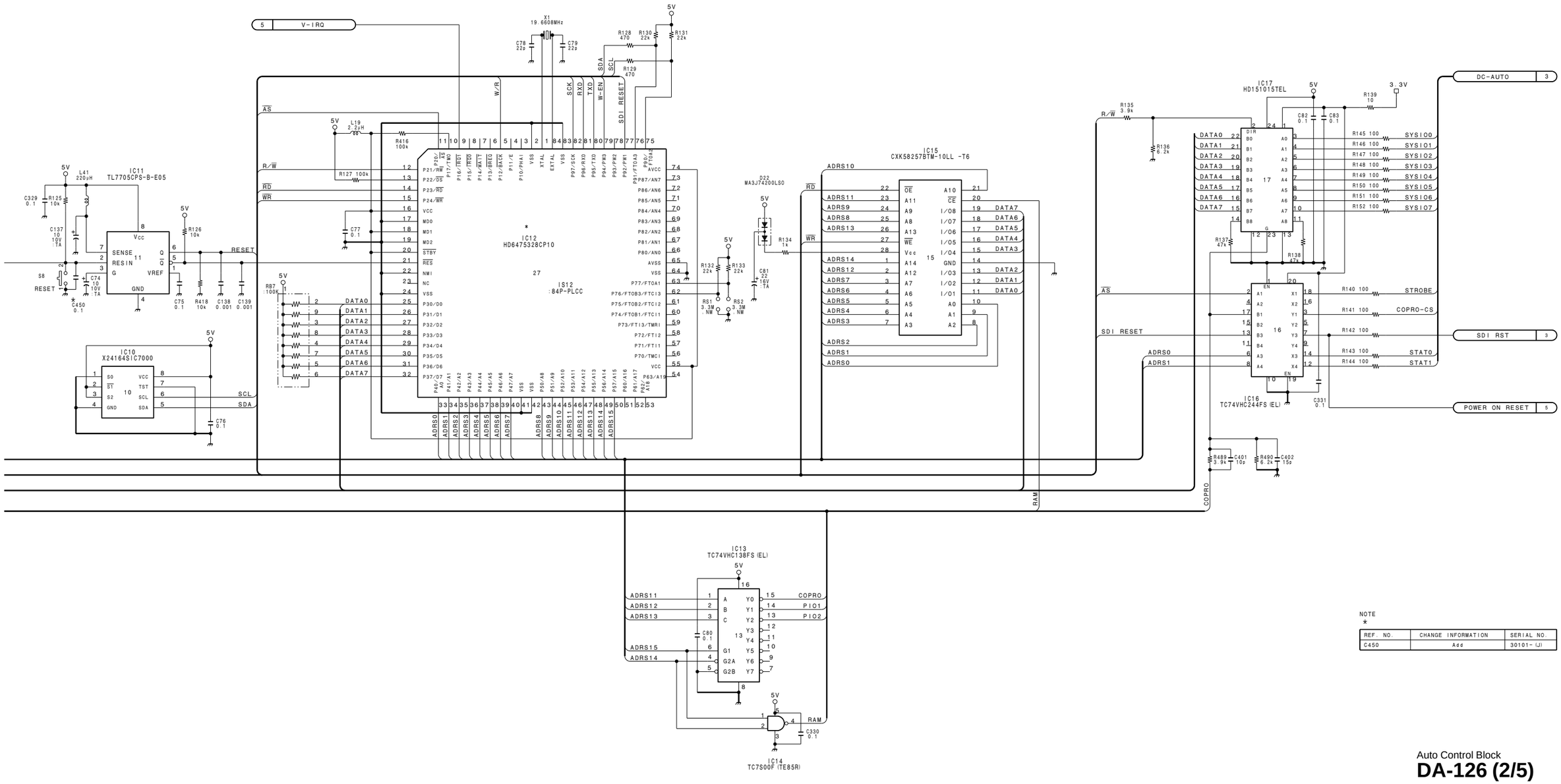
B-¥HKPF102-DA126-11ⓐ

DA-126 (2/5)

HKPF-102 (J) : S/N 30001 through 30300



8-4



NOTE
*

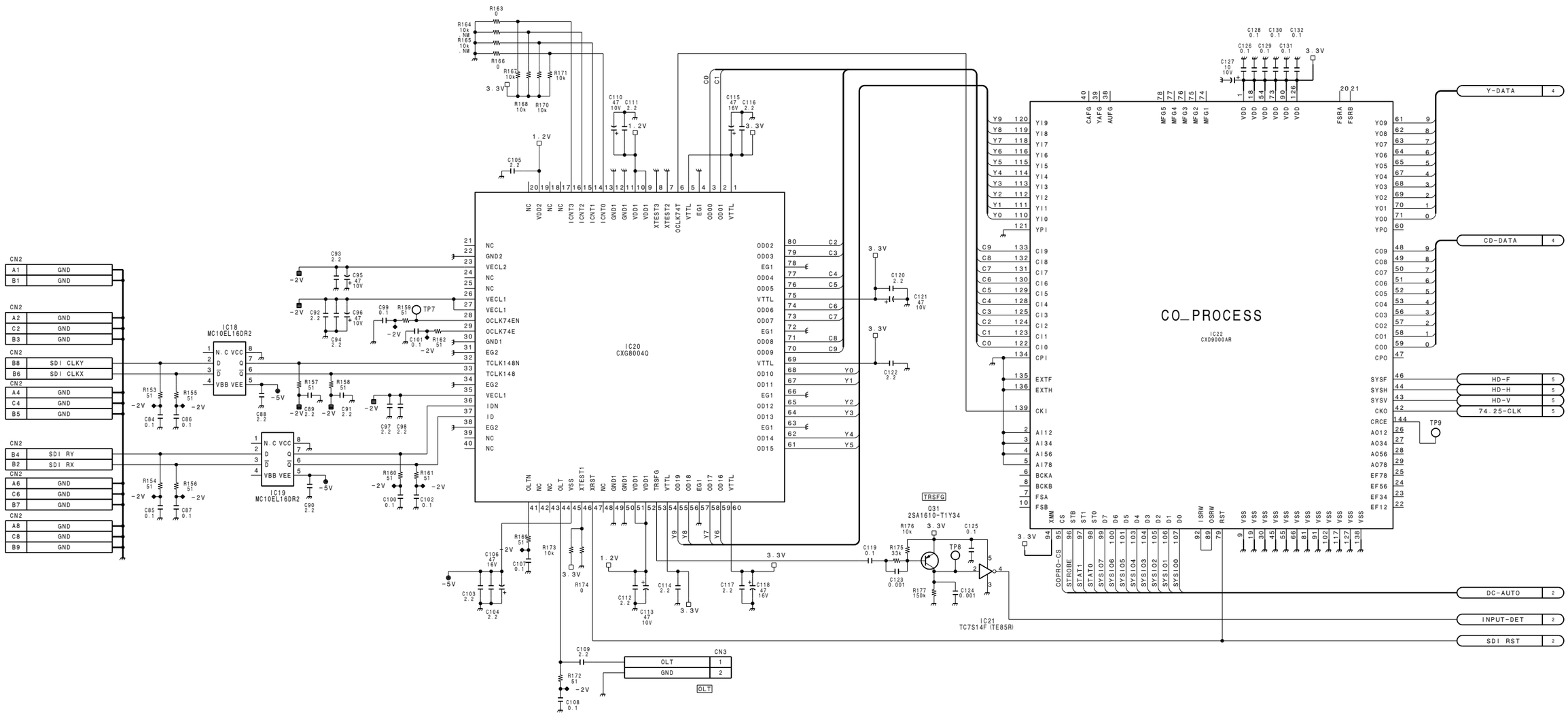
REF. NO.	CHANGE INFORMATION	SERIAL NO.
C450	Add	30101- (J)

Auto Control Block

DA-126 (2/5)

BOARD NO. 1-665-440-11
LOT NO. 612-
B-¥HKPF102-DA126-11ⓐ

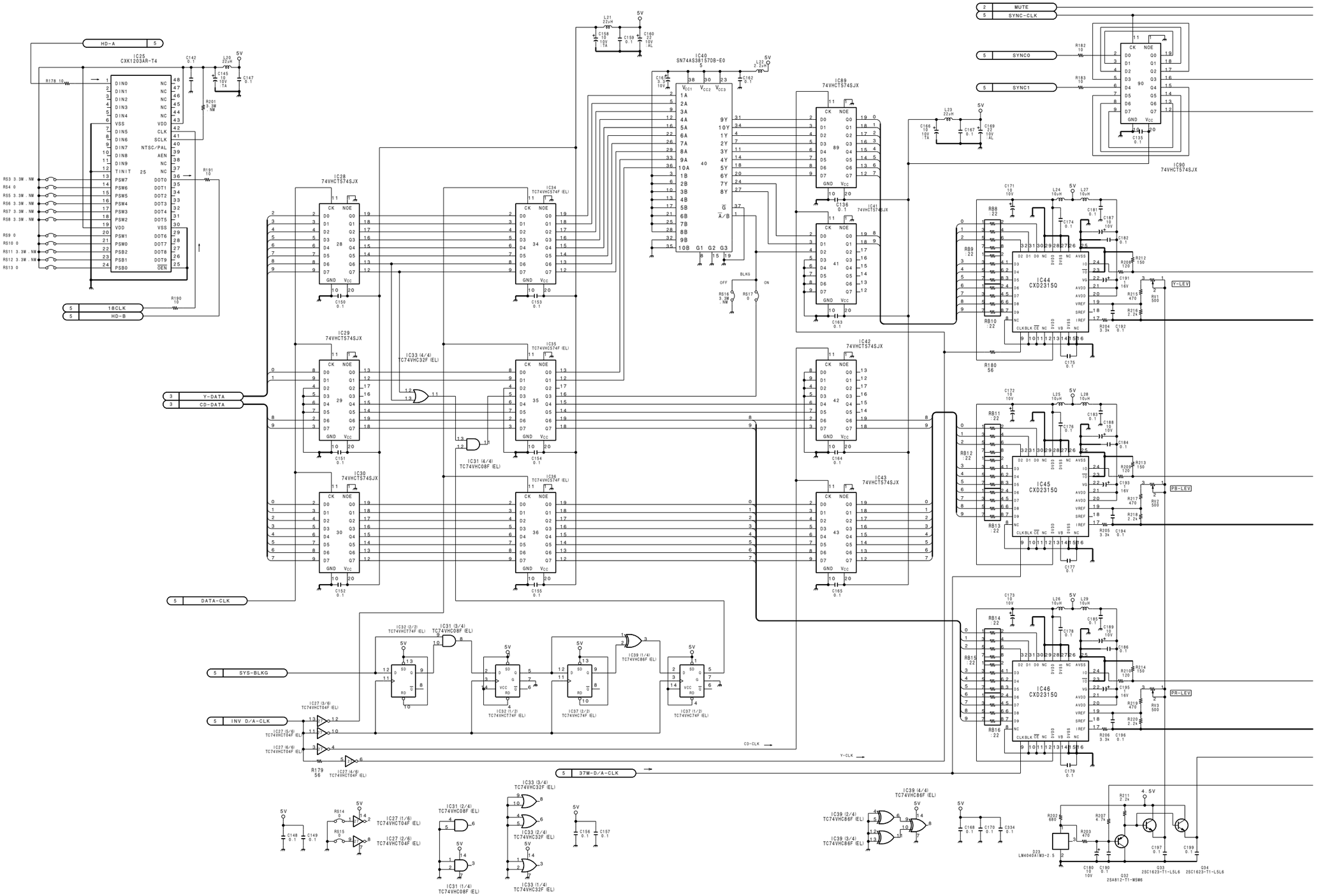
HKPF-102 (J) : S/N 30001 through 30300



1.5 GHz Processing Block
DA-126 (3/5)
BOARD NO. 1-665-440-11
LOT NO. 612-
B-¥HKPF102-DA126-11ⓐ

DA-126 (4/5)

HKPF-102 (J) : S/N 30001 through 30300



8-8

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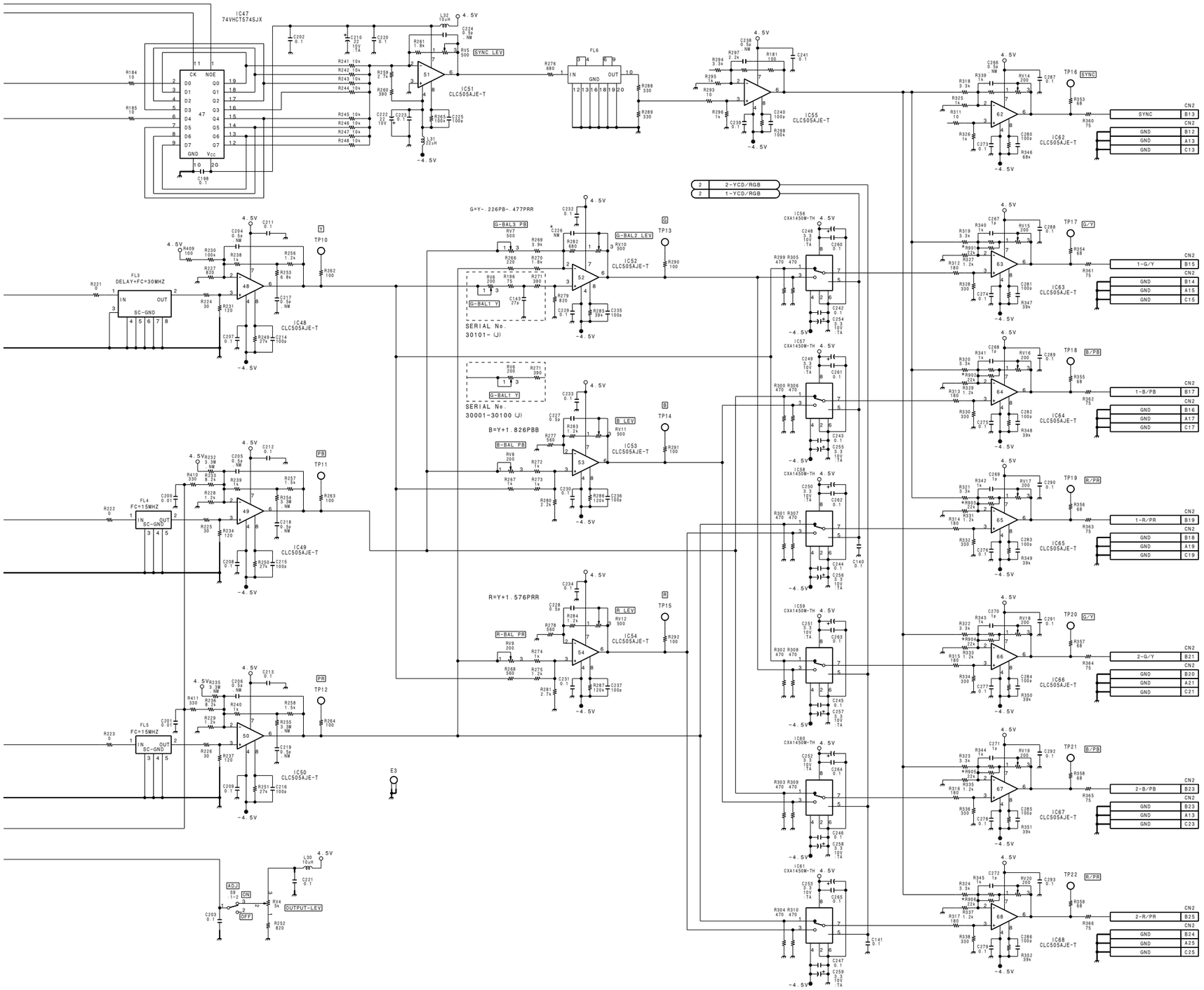


NOTE
*

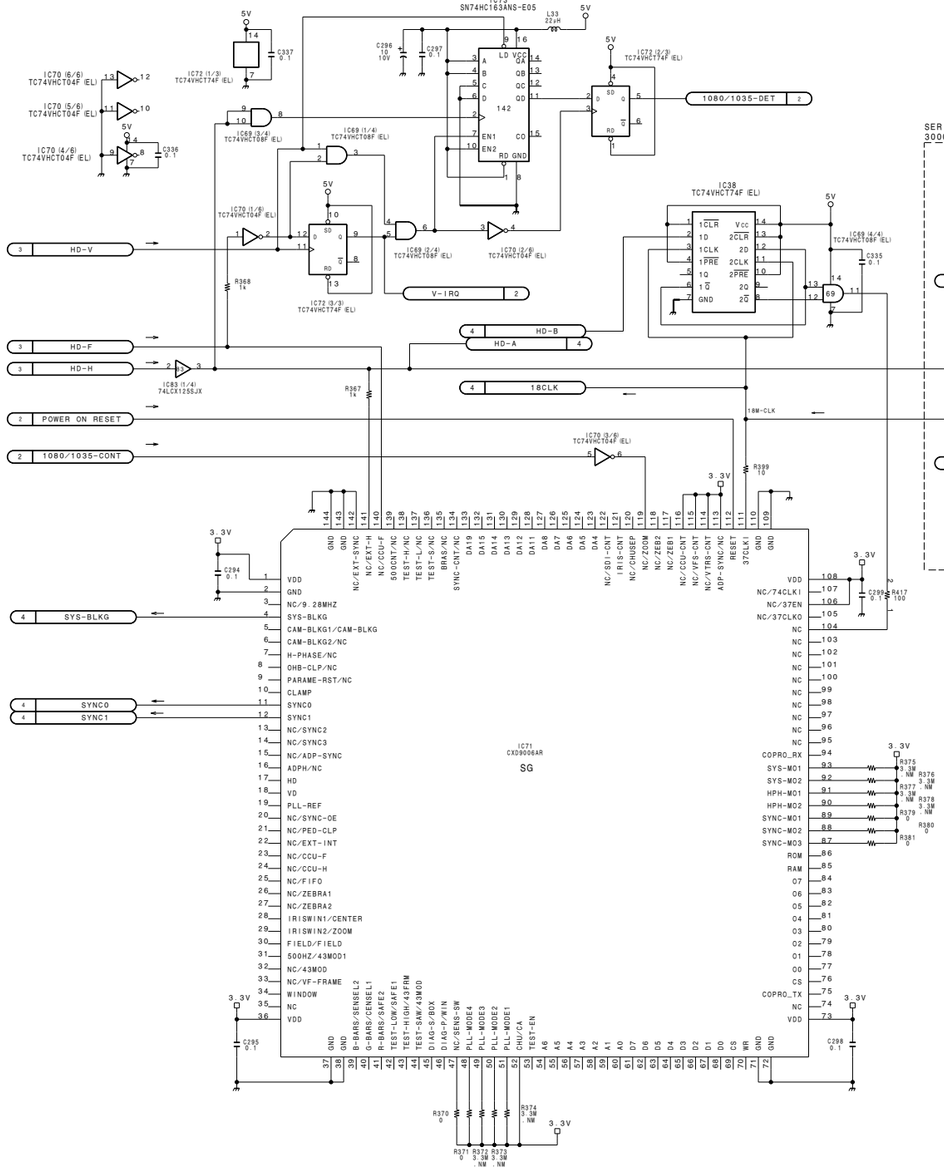
REF. NO.	CHANGE INFORMATION	SERIAL NO.
C226	Delete	30101- (J)
R901, R902, R903, R904, R905, R906		

Video Processing Block

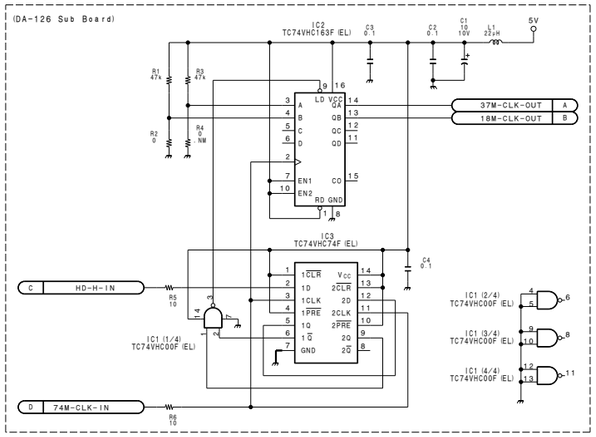
DA-126 (4/5)

BOARD NO. 1-665-440-11
LOT NO. 612-
B-¥HKPF102-DA126-11ⓐ

HKPF-102 (J) : S/N 30001 through 30300



SERIAL NO.
30101-30300 (J)



NOTE

REF. NO.	CHANGE INFORMATION	SERIAL NO.
*		
RS29	Add	30101- (J)
RS30	DELETE	

Signal Generator Block

DA-126 (5/5)

BOARD NO. 1-665-440-11
LOT NO. 612-

B-VHKPF102-DA126-11ⓐ

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Broadcasting & Professional Systems Company

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